Clinical Lectures ON INFANTILE PARALYSIS AND ITS RESULTING DEFORMITIES.

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LECTURE IV.

THE cases detailed in my last lecture show the great value of large doses of strychnine injected into the substance of paralysed muscles, or into the tissue surrounding motor nerves. Nevertheless a few words of caution may be necessary; for many a remedy of considerable power has been discredited by its infelicitous application to unfitting cases.

Now, the measure I here introduce is not to be tried in any case of centric paralysis, either cerebral or spinal. Neither is it available in syphilitic, the first stages of lead, or the earlier phases of gout paralysis. On the other hand, loss of motor power from pressure on a nerve, from debility after exhausting disease (diphtheria, scarlatina, or low fevers), also the latter stages of lead and gout paralysis, likewise reflex paralysis when the cause of irritation has ceased, have all, as well as infantile paralysis, proved in my hands amenable to this treatment.

It would be well here to define what special circumstances may in these cases justify the peculiar use of the drug; and also the behaviour of muscles improving under its use to the galvanic currents. These two points, being mutually interrelated, will assist to elucidate each other. It will have been remarked, in the cases given during the previous lecture, that injections of strychnine were usually employed, in cases of infantile paralysis, after galvanism as well as the internal use of the drug had failed to restore power. In most of these cases, also, different forms of galvanism, employed over long periods of time, had called forth no muscular movement: here the indication is plain and simple. Another class of cases consists of those in which the constant current produces more or less movement, but progress is altogether wanting or is very slow: here the local use of strychnine will hasten recovery immensely. A third set comprise hand or limb paralysis from pressure on or injury to the nerve: and here, again, I have found strychnine restore power without any galvanism or other remedy whatever. In the later stages of gout and lead and syphilitic paralysis, when the constitutional malady has been sufficiently mitigated without rapid return of power—likewise in paralysis from exhausting disease—I would recommend immediate resort to injections of strychnia, without any previous use of the other remedies, which I have found so frequently to fail.

The behaviour of muscles to the two galvanic currents is in these cases various. In the first class the recovery goes through regular phases, the muscles learning to respond firstly to the constant, then to the interrupted current, and gradually acquiring a certain amount of voluntary movement. In the second class, the action of the constant current (which exists at the time of injection) is entirely annulled, or greatly diminished, and a susceptibility to the induced current commences. The third set very frequently recovers entire voluntary power without ever becoming susceptible to either current, or not more susceptible than at first. Of the fourth set, consisting of a great number of different paralysis-producing maladies, some recover without any electric sense, others become extremely susceptible. I must, however, be permitted to leave them for the present unclassified.*

I must now beg to turn for a time from the malady I have described as a single, sudden event in the infant's life—striking a painless blow—but not aiming at life, nor ever striking again. I must turn from this to a form of disease which, utterly different in origin and progress, leads to a similar result. There is a species of paralysis or loss of power appertaining to child-life which, rarely or never complete, commences very slowly, generally after the child has begun to walk, and indeed to walk well; it is most usual between the ages of two and five, and more common in boys than in girls. A mother or nurse will relate the following history in nearly every case:—The boy was, up to a certain period, lively and well, gradually became irritable and languid, then after an interval the previous very excellent gait became embarrassed, the child frequently falling, and lameness rapidly but not suddenly set in. The surgeon will perceive that one limb does not support the weight of the body as well as the other, and moves more slowly; the foot hangs and is turned outward; the ankle, and, if the case be old, the knee also have yielded inwards; the whole limb is flabby, is smaller than the other, rarely cold. The child, though at times it may be lively and chattering, has periods of apparently causeless oppression and taciturnity, generally frowning heavily; the whole system appears depressed, yet it is easily excited or alarmed by any unusual sight or noise, and almost instantly sinks into vacant-looking apathy or lapses into low wailing. Of any organic change there is no trace, yet the whole condition is unequivocally wrong, the nervous system exhausted and unstrung.

In such cases it is necessary to watch the boy when stripped with great attention—to tap over the loins and sacrum, to look at the condition of the penis, when it will generally be found that a narrow phimosis exists, that the organ erects at the slightest touch either on the spot, its neighbourhood, or on the lower part of the spine. Frequently also the child will lay hold of or pull at the part. In the case of little girls, some less obvious cause of genital irritation may with care be detected: for instance, ascarides may pass from the rectum into the vagina, and set up constant tickling; a highly acid condition of urine, or a pruritus from want of cleanliness, may have a similar effect. These irritant causes in either sex may, I am sorry to say do, occasionally induce in young children the habit of themselves exciting or irritating the genitals. I am, however, anxious to avoid diving into subjects so abhorrent, and would rather refer to a paper in the *Journal für Kinderkrankheiten* (vol. xl., p. 335), and to a lecture by Mr. Athol Johnson in THE LANCET of April 7th, 1860. I do this the more readily as genital irritation naturally, not artificially, produced frequently gives rise to the loss of power I am describing without any fault whatever on the child's part. In boys phimosis is generally the cause;* and when a boy with slowly increasing loss of power presents himself, I always examine; and if there be phimosis, especially if combined with easily-induced and frequent priapism, I always recommend circumcision, and have always found benefit from the operation.

Infantile paralysis—viz., the sudden attack I have described—may coexist with phimosis, and the one in all probability have no relation to the other. Moreover, it is a matter of course that thousands of boys have phimosis and never a touch of paralysis; but when a more or less quickly increasing, not a sudden, loss of power is combined with phimosis and frequent erection, circumcision should at once be resorted to, and *a fortiori* if a change in the child's temper and mental condition have preceded and accompanied the loss of power.

In the treatment of girls, if ascarides or highly acid urine or pruritus be detected, the indications are plain. When no cause can be found for morbid redness and irritability about the vulva, combined or not with some discharge, the actions and favourite attitudes of the child are to be closely watched and means adopted accordingly. We should prevent her sleeping on her back—may even have to adopt some little restraint; sometimes a sharp sudden punishment, as drenching with cold water, may check evil habits. Judicious management will do more than surgical interference, and at all events I have never been obliged to resort to making the parts sore, as has been recommended by some authors.

One or two short relations of cases, selected from a large number, must, in the pressure of space, suffice.

April, 1870.—S. C——, aged four years, was strong and healthy, walked well till fifteen months ago. He had seemed

* I would beg many gentlemen who have written to me concerning this strychnine solution to allow me to answer their letters here. It is made for me by Messrs. Haselden, of Conduit-street.

* In one case removal of a hitherto undetected calculus cured the limb weakness.

ailing, and was fretful for a week or two before his mother observed that he did not walk so well, and frequently fell. This evil increased, and he was brought to me at the above date. The boy answers readily, and is well-mannered while being talked to and amused, but when left to himself falls into a vacant stare at nothing—seems lost. If spoken to while in this state he often does not appear to hear; if addressed sharply and suddenly, starts—generally cries—if not, is cross and peevish. I had in this case tried galvanism and injections of strychnia; they were useless. I had him stripped, and examined the spine. Found nothing morbid there, but while doing this priapism came on and he frequently laid hold of the penis. I saw too that there was a narrow phimosis. It struck me (this was my first case of the sort) that the paralysis might be of a reflex nature from genital irritation, and, my proposal being accepted, I circumcised the child, finding the prepuce almost entirely adherent save round the corona, where much thick secretion was stored. The boy got rapidly better, and in a few months walked as well as ever.

June, 1871.—M. S——, a little girl aged five, was brought to me with loss of power, or rather great weakness, of one leg, which had commenced and increased during the last few months. The child was, till a year ago, good tempered; has become fretful and uneven in character. This, like the lameness, is sometimes worse, sometimes better. I examined this child and also elicited that she not unfrequently had a yellowish vaginal discharge. Certain symptoms pointed to the existence of ascarides. I ordered a slight purge, whose action was to be instantly followed by an injection of iron and quassia. Great quantities of ascarides were voided. As a matter of precaution this was ordered to be repeated fortnightly; the child also was carefully watched. In a month great improvement was manifest. A little bromide of iron was then given. In three months more the child walked very well, although the left leg continued rather thinner than the right.

ABSTRACT OF

Lectures

ON

DISEASES AND INJURIES OF THE EAR.

Delivered in St. George's Hospital,

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LECTURES III. & IV.

In examining the anatomy of the tympanum, it is well to make use of a temporal bone as soon as possible after its removal from the subject, as the muscles very soon get dry, and their action cannot be seen on dragging on them with forceps. The whole of the osseous part of the meatus should be chipped away with a pair of bone cutters, the roof of the tympanum picked off with forceps, and the tympanic membrane carefully cut away from its attachments. In the dissections before us made in this way the cavity of the tympanum is well seen, with its contents. Examine carefully the position of the chain of ossicles, how they rotate round an axis represented by a line drawn through the processus gracilis of the malleus and the short process of the incus; also the relations of the tympanum to the cavity of the cranium, the lateral sinus, the jugular fossa, the carotid artery, and to the mastoid cells. The tympanic membrane has for an outer layer the skin of the external meatus, and for an inner layer the mucous membrane lining the tympanum. Between these two comes the membrane proper, composed of outer radiating fibres derived from the periosteal lining of the external meatus, and inner circular fibres from the periosteum of the tympanum. The curvature of the membrane is not, strictly speaking, a concavity, but rather a tucking in; for the parts not dragged upon by the handle of the malleus show an inclination rather the other way. In the living subject the tympanic membrane is translucent, lustrous, and of a bright slate colour. At the upper part is seen the short process of the malleus shining through and pressing on the membrane. Passing down the middle from above is the handle of the malleus, terminating in what is called the umbo. From this downwards and forwards is seen what is spoken of as the bright spot. This appearance, observed on looking down a speculum with reflected light, is due, according to Politzer, to the inclination given to the membrane by the traction of the malleus; for the light, being cast upon the membrane, is for the most part reflected on to the lower part of the meatus, but on the spot signified is reflected directly to the eye of the observer. A wave of sound falling upon the tympanic membrane will set in motion the air within the tympanum, and these vibrations will affect the membrane of the fenestra rotunda; but it seems that more important for the purpose of hearing are those vibrations which act upon the chain of ossicles. These bones are so arranged as to make their vibrations, as a whole, so much more effective than those of their particles that their subsidiary vibrations may be put out of consideration. The fluid contents of the labyrinth being thus set in motion, the terminations of the auditory nerve are excited; in other words, hearing is effected. Whatever circumstances, therefore, interfere with the proper performance of the functions of this conducting apparatus (and in it must be included the Eustachian tube, whose office appears to be, by admitting air from the pharynx, to insure the same pressure from air within the tympanum as from the air external to the membrane) will come under the head of diseases of the middle ear.

In commencing this subject, if it be remembered that this cavity, closed at one end by the tympanic membrane and opening at the other into the pharynx, is lined throughout by mucous membrane, which is subject to the same affections in this situation as in any other part of the body (within certain limits), and that here the course of inflammation, the changes attending it, and its products, are no different than when the same morbid action takes place elsewhere, all the obscurity that generally surrounds these diseases will disappear. To take an illustration of the simplest kind. Hyperæmia, swelling of the submucous areolar tissue, with increased secretion of the mucous membrane in the neighbourhood of the faucial orifice of the Eustachian tube, would on account of the small calibre of this tube offer some obstruction to the free passage of air from the pharynx into the tympanum. The air in the middle ear, not being replenished as usual, becomes subject to more or less absorption, the density of the air within the tube is diminished, the pressure of air from without the tympanic membrane remaining the same; the inward curvature of the membrane is increased; the chain of ossicles are rotated somewhat inwards, thus increasing the pressure of the stapes on the fenestra ovalis; and sonorous vibrations impinging on the tympanic membrane do not produce the same effect on the labyrinth as heretofore. In other words, there is deafness from obstruction of the Eustachian tube. If the balance of air is restored by suitable means, the normal hearing power instantly returns, and, supposing the inflammation to subside, the patient gets well. To take another illustration of a more severe kind. Suppose inflammatory action in the cavity of the tympanum to have proceeded to the formation of pus. If the purulent matter cannot find an exit through the Eustachian tube into the pharynx (at this time the lining membrane of the tympanum is so swelled that the opening of this tube into the tympanum is closed) it will make for itself an escape by a process of ulceration through the tympanic membrane, and there will be more or less disorganisation of the tympanum, according to the length and severity of the attack, before the matter has found its way out. A series of gradations between these two extremes will give a very fair representation of diseases of the middle ear, each form possessing some characteristics of its own, and varying in the effects which it leaves behind.

The term catarrh is used in speaking of affections of the middle ear—non-purulent or purulent as the increased secretion has retained its mucous character or become pus. More frequently than not catarrh of either kind begins at the faucial end of the Eustachian tube, and very often only a short part of the tube is involved. A chronic affection of this portion of the middle ear may remain for months without proceeding any further, in precisely the

same way that a bronchitis will at one time be confined to the larger divisions of the bronchi; and as sometimes in a few hours the inflammation may spread to the capillary divisions of the bronchial tubes, and be attended with purulent expectoration, so may pus be secreted from the lining membrane of the tympanum in a few hours, when (as in scarlet fever) inflammation has spread from the throat up the Eustachian tube. Other affections of the middle ear commence in, and are confined throughout their course to, the cavity of the tympanum. An example of the mildest form of non-purulent catarrh affecting only the faucial orifice of the Eustachian tube is when an adult becomes deaf during a cold and recovers in two or three days without treatment. The return to good hearing is often attended with a crack in the ears, the explanation of which is, that as the sides of the tube, which were in apposition, become separated, the air rushes into the tympanum, and the membrane, which was before drawn in on account of the unequal pressure of the air from without, resumes its natural curvature as soon as the balance of air on either side is restored. This is the mechanical change which we attempt to bring about and endeavour to render permanent in all treatment of impaired hearing arising from such causes. But if this return to the normal condition does not take place, the deafness continues and recourse must be had to treatment.

A method of opening the Eustachian tube which is at the same time most simple and effective was introduced some time ago by Dr. Adam Politzer, of Vienna. It consists in passing a stream of air through the inferior meatus of the nose during the act of swallowing (at this moment the opposed sides of the faucial orifice are drawn apart by the palate muscles), when the air will rush up the tubes into the tympana, and is described by Dr. Politzer as follows:—"The patient, being seated, takes some water into his mouth, to be swallowed at a given signal. The surgeon, placing himself conveniently to the right of the patient, grasps with his right hand an india-rubber bag about as large as the two fists, and introduces the nozzle of a somewhat curved, hard, india-rubber tube, movably connected with it, about half an inch into the nostril, so that its concavity is in contact with the floor of the nares. The signal to swallow is now given; both alæ are at the same time closed air-tight over the instrument with the thumb and forefinger of the left hand, and, by a forcible pressure of the right hand, the air is driven out of the bag into the now shut nasal cavity."

This method is now in constant use in the out-patient room both for purposes of diagnosis and treatment. When it is being employed, what is somewhat wordily called an "otoscope" should be used with it. The best kind is a simple piece of india-rubber tubing, about three feet long, one end resting in the external auditory meatus of the patient, and the other in that of the surgeon. By the help of this, the air, as it rushes into the tympana, can be heard by the surgeon to impinge on the tympanic membrane. To be able to recognise this sound, some little practice is necessary; and it is also advisable that a bag be used which makes as little noise as possible when it is compressed. For this reason it is much better to have the valve placed at the lower part of the bag than the upper. Until Politzer introduced this method, the Eustachian catheter (the uses of which will be considered shortly) was the only available instrument for overcoming Eustachian obstruction. Its place has, therefore, been to some extent supplied, and it is not necessary to use it so frequently as it was some years ago. With healthy adults, if Eustachian obstruction occurs in the manner related, and persists after the nasal catarrh has got well, no other treatment beyond inflation of the tympana is necessary. The frequency with which it should be practised, and the length of time necessary to continue the treatment, will of course vary according to the severity of the case. The best guide in the matter will be the length of periods that the improvement in hearing remains after each occasion. This will sometimes only last a few hours (perhaps the morning following the inflation the patient will be as deaf as ever), and the case will then give some trouble. The good hearing may, however, remain for two or three days; and these patients will only require the air-douche a few times. With cases of this kind the change in appearance noticeable in the tympanic membrane is an increase in the inward curvature, a more than usual prominence of the short process of the malleus, and some retraction of the handle. As may be supposed from this, there will be undue pressure of the stapes on the fenestra ovalis; and this will sometimes induce tinnitus, which is however not generally of a very severe character, and by no means a constant accompaniment. When it is present, it disappears, like the deafness, simultaneously with the inflation of the tympana. When a Eustachian tube is pervious, as in health, if the patient blow into the tympana with his mouth and nose firmly closed, the air can be heard through the otoscope by the surgeon to fall upon the membrane with a "thud." This is spoken of as Valsalva's method of inflating the tympana, and is useful in estimating the extent of permeability or the reverse of the Eustachian tubes. It is especially valuable where a difference exists on the two sides; and if the difference amounts to perfect closure of one, with normal patency of the other, it furnishes an unmistakable diagnostic sign. It is also useful in the evidence which it affords of secretion in abnormal quantity in the cavity of the tympanum, as shown by the sounds heard through the otoscope, and the appearances observable whilst inspecting the tympanic membrane as it is being done. That at this moment the air not only enters the tympana, but that it is accompanied by an outward movement of the membrane, can be demonstrated by a very simple experiment suggested originally by Politzer. A piece of glass tubing curved in the shape of a horseshoe, and open at both ends, has fitted to one end an india-rubber nozzle. Some coloured solution is poured into the tube. The nozzle is fixed into the external auditory meatus, which it fits air-tight. As the Valsalvan method is practised, the fluid is seen to rise in the distant arm of the tube, and, upon the patient swallowing, to fall to the original level. The movement of fluid is obviously due to the condensation of air between the tympanic membrane and fluid in the near arm, this being brought about by the outward movement of the membrane. This instrument is not of much practical use, as the otoscope will demonstrate a pervious state of the Eustachian tube or the reverse. Far more common than with adults is the Eustachian obstruction met with in children, especially in those of a strumous type. In these subjects a vast extent of mucous membrane is in the same condition—the nares, fauces, and Eustachian tube being affected together. The mucous membrane throughout is thickened and tumid, and secretion from the surface is much more abundant than it should be. The tonsils are generally enlarged, and sometimes to a very considerable extent. Of such children it is hardly necessary to ask what is the matter. The stupid, vacant look as they advance with open mouth, and their generally flabby appearance, proclaim their disease. They snore loudly in their sleep, and the deafness is generally severe. The tympanic membrane will be seen to be drawn in, but to retain its proper translucency; as a rule there is no tinnitus. It is surprising for what a length of time this state of things will go on with children, and yet permit of complete recovery; while, on the other hand, in the case of adults, when the Eustachian tube is obstructed from a relaxed condition of the mucous membrane, the tympanum will generally become involved if they are not attended to soon after the deafness is noticed. The treatment to be adopted for these young patients is to apply astringent solutions locally to the fauces, tonic medicines (preparations of iron and the mineral acids), plenty of fresh air and exercise, together with the ordinary rational means of improving the health. The tonsils, however much they may be enlarged, cannot operate mechanically by closing the Eustachian tube, but they may interfere with respiration, and, by presenting a large surface of thickened mucous membrane, assist in keeping up the unhealthy condition. These considerations should weigh in deciding whether they should be removed or not. Of all things it is important that the Eustachian tube should be regularly opened; if this is not done, all else will be useless. To accomplish this, Politzer's is the best method. Measured by the good it has done, it would be difficult to overvalue this proceeding in treating diseases of the middle ear; for before this plan was suggested, a large number of cases, especially children and timid women, on whom catheterisation was not practicable, went unrelieved.

After the inflation, although the hearing is at once very much improved, the deafness will not unfrequently return in a few hours. It should, however, be assiduously persevered with; and as the mucous membrane gets into a more

healthy condition, the periods of good hearing will become longer and longer, and improvements which at first lasted only for six hours will after a few times remain for twenty-four, and so on. When the Eustachian tube admits of air passing through it in the natural way, the ossicles and tympanic membrane will remain in their proper position. No trouble on the part of the patient and surgeon should be grudged to ensure this, as good results will assuredly repay labour thus bestowed. With some of these children it may suffice to inflate the tympana once or twice a week, while with others daily inflation for a few times may be necessary; but, sooner or later, the hearing will be completely restored.

THE RELATIVE FREQUENCY OF DISEASE BETWEEN THE RIGHT AND LEFT SIDES OF THE HEART;

DEGENERATION OF THE HEART, ITS CAUSES AND MEANS OF AVOIDANCE.

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(*Continued from p. 444.*)

Fatty degeneration of the heart—But one form of this disease—General and micro copic appearances—Pathological cause of this degeneration—How produced—Frequent cause of sudden death—How death is produced—Indications during life of the existence of fatty degeneration.

IN my last communication I described the general and microscopic condition of the heart's muscular fibres when they have undergone degeneration from the long-continued action upon them of hyper-carbonised blood, the result of defective aeration of that fluid. It was shown that the ultimate cells of which the fibrillæ of a muscular fibre are composed are permanently increased in their longitudinal diameter; that some of those cells are distended with a dark-coloured serosity; that both fibrillæ and fibres are less compactly and less firmly packed together than in their healthy condition; that their outlines are more irregular; that the sarcolemma exhibits varies fissures or rents; and that the transverse and longitudinal striæ are more or less obliterated. It was further shown, that the epithelium of the endocardium is but very imperfectly developed; that the vessels lying immediately beneath its basement membrane are distended with dark blood, by which their usual interspaces are narrowed, and from which the endocardium itself presents a bluish or slaty-coloured appearance; that a similar distension with dark blood affects the nutrient vessels lying upon the sarcolemma, giving the substance of the heart's walls also a dark-red appearance; and that this condition of the vessels and of the blood affects the external surface of the heart in like manner. The effect of these alterations in the ultimate structures of the heart's walls is, as was explained, to diminish the heart's contractile power, to favour dilatation of its cavities, and to render it liable to rupture, or to reduce its power to such a minimum degree that death, more or less sudden, takes place. The general appearance of such a heart, as the eye falls upon it *in situ*, was shown to represent it as apparently somewhat enlarged and of a bluish-red or slaty colour. Very different indeed is it, in this respect, from that of the heart when suffering from fatty degeneration.

A heart which has undergone fatty degeneration presents on its external aspect either a pale-fawn colour, or a mottled appearance from the intermingling of pale-buff and more deeply coloured patches, or a faded hue of the healthy heart. It is soft, relaxed, and generally friable to the touch; its walls are thinned, and its cavities often dilated. Its paleness of colour, comparative bloodlessness, softness, laxity, and the attenuation and friability of its walls convey the impression that such a heart has been improperly nourished. This impression is further confirmed by the results of section and by the microscopic evidences which the muscular structure of the heart affords.

On section, the blade of the knife is rendered greasy—a condition due to the presence of fat, which is not found on section of a healthy heart.

On microscopic examination, the muscular fibres are seen to have undergone the following changes:—When the fibres are diseased, those of the voluntary class have lost, either entirely or partially, their transverse and longitudinal striæ; and along the longitudinal axis of their fibrillæ the sarcous element has been replaced by a chain of molecules of oil. In some instances, the sarcous element of all the fibrillæ of a fibre has undergone this degeneration. In other instances, a part only of this element has been thus transformed. When the whole has undergone this change, a string of oil-globules from 1-6000th to 1-5000th of an inch in diameter occupies the sarcolemma; but when a partial conversion only of the sarcous element has taken place, mere points or dots of oil are scattered hither and thither, in broken line, along the longitudinal axis of the fibrillæ. Each such dot represents one or more cells which previously formed a part of a healthy fibril. Hence the number of such oil-dots present in a fibre is a measure of the degree of fatty degeneration which the fibre has undergone. When all the cells of a fibre have been converted, the mere points or dots of oil coalesce, and form oil-globules of the diameter before named. In this case, the fibre has lost its sharp, well-defined outline; and when many fibres thus affected lie together, they present the appearance of being blended into one indistinguishable mass. Where a part only of the cells has degenerated, the outline of the fibre is rendered irregular; and where this condition extends to many other contiguous fibres, the whole surface which they form presents these irregularities in dimly distinct and wavy outline. In the involuntary muscular fibres similar changes are observed.

Now, what has caused this conversion of the muscular fibre into fat? How has it been brought about? Has it a local origin only, or has the local change a constitutional cause?

In elucidation of the points which these questions involve it may be remarked, that the disease is essentially one which occurs in the later periods of life—that it nevertheless occurs in the young—and that when found in the heart it is generally found at the same time in other organs, as the liver, the spleen, the cornea, and the arteries.

That the disease results from the metamorphosis of the sarcous element of the muscular fibre, and not from the mere absorption of that element and the deposit in its place of fat in the ordinary process of nutrition, is indicated by the fact that the fat is contained *within* the sarcolemma of the fibre. When fat is deposited from the blood of an organ whose function does not produce fat, it is always deposited either *upon* the surface of that organ, or, if beneath the surface, upon the *exterior* of those elements of which the organ is composed. Hence the connective tissue is the seat of *deposited* fat. In this tissue we find it deposited beneath the pericardium, upon the exterior of the heart, beneath the endocardium, and also between the muscular fibres themselves. In neither of these situations does it constitute fatty degeneration. It should rather be called fatty deposit, or, in the language of Dr. Quain, "fatty growth." There is then but *one* form of fatty degeneration of the heart, and that form is expressed by the metamorphosis of the sarcous elements into fat, which is found within the sarcolemma itself.

According to the view already expressed, this substitution of fat for the sarcous element of the muscular fibre is not the result of the absorption of the one and the deposit of the other, but it is the product of the metamorphosis of the muscular element. Can then muscular fibre be converted into fat? No doubt it can. The pure fibrine of muscle has the same composition as blood-albumen—$C_{216}N_{37}S_2H_{169}O_{83}$, with phosphates. All that is wanted here to derive from it the fat found in the sarcolemma of the muscular fibres of the heart is to separate these elements, to withdraw the nitrogen and sulphur entirely, and to recombine the carbon, hydrogen, and oxygen in different proportions. The less the vitality of a part the more easily does the combination of these elements give way—the more readily do they escape from the controlling power of the vital force, and become subject to simply chemical influences. After the

age of forty the vital force begins, as a rule, to relax its hold upon the tissues, and thus to acknowledge that there is a limit to its existence—that life ends in death—and that, in the beautiful language of Bacon, "It is as natural to die as to be born."

When the tissues have reached this retrograde state of vitality—when, like the stones of an edifice upon whose face time has raised the first blisters of decay, and from whose junctions the mortar is beginning to crumble ere yet it falls, they have entered upon a downward tendency; the same active agents which ultimately complete the destruction of the mouldering edifice overpower here the feeble hold of life and effect the disruption of the muscular fibre into its ultimate elements. In doing this, oxygen and hydrogen, conveyed to the tissues by the blood, seize the nitrogen and sulphur, converting the one into ammonia and the other into sulphuric acid, and as such, either separately or in combination, hurry them by the natural outlets from the body. The carbon and a part of the oxygen and hydrogen are left behind; and these, combining in the following proportions, form the different fats which together constitute the oil-particles and globules found in the fattily degenerated fibres of the heart. These fats are the products of the combination of fatty acids with a hypothetical radical termed lipyle, with which they form respectively *olein*e and *margarine*. The former results from the combination of one atom of the oxide of lipyle—$C_3 H_2 O$ + one atom of oleic acid, $C_{36} H_{34} O_4 = C_{39} H_{36} O_5$, one atom of oleine; and the latter from one atom of the oxide of lipyle, $C_3 H_2 O$ + one atom of margaric acid, $C_{34} H_{34} O_4 = C_{37} H_{36} O_5$, one atom of margarine. To this group belongs *stearine;* but as I question its presence in the fatty product found in the sarcolemma of the degenerated muscular fibre, I give but its formula, which is the following:—Oxide of lipyle, $C_3 H_2 O$ + stearic acid, $C_{34} H_{33} O_3 HO = C_{37} H_{35} O_4 HO$, one atom of stearine.

But why, it may be asked, if this doctrine is true, are the nitrogen and sulphur of the sarcous elements of the muscular fibre removed, and the other elements—carbon, hydrogen, and oxygen—left wholly, or in part, behind? The answer is, that there is an excess of carbon in the blood, and that there is a relative deficiency of oxygen. An excess of carbon in the blood prevents the oxygen carried by that fluid from combining with the carbon of the muscular fibre, and removing it as carbonic acid from the system. It is well known that when the respired air contains 10 per cent. of carbonic acid the further exhalation of that gas from the lungs is prevented. In like manner, *when the blood contains more than the ordinary quantity of carbonic acid, the carbon of the tissues ceases to be acted upon by oxygen so as to be converted into carbonic acid.* It is shut up in the muscular fibre, where it combines with hydrogen and oxygen in the proportions necessary to form fat, which thus appears in the place of the sarcous elements.

How, then, does the blood acquire this excess of carbon? By deficient or defective respiration, or by an excess of carbon taken into the system in the food or drink, or by all these means together.

Deficient respiration attends the muscular debility which waits on age, sedentary habits, and disease. Defective respiration occurs whenever the air respired contains more than the one-thousandth part of carbonic acid by volume. An excess of carbon may be conveyed into the blood by the too exclusive use of a vegetable diet, and especially by the too frequent imbibition of alcoholic fluids. These facts account for the occurrence of fatty degeneration at all periods of life, but especially after the age of forty. They point to those who have passed the meridian of life, to green old age, to age shuffling in his slippers and pantaloons, to the diseased, the feeble of constitution, the studious, the emboweled in earth, the denizen of the workshop, the pent-up citizen, to the merchant confined in his ill-ventilated office, and to the drunkard, as the elected of its inheritance. They show, too, why fatty degeneration of the heart never, as a rule, exists alone; why it is always associated with fatty degeneration of other organs. Is it, then, a local or a constitutional disease? It is, strictly speaking, neither the one nor the other. It is a local expression of a particular condition of the blood, which age, habit, disease, or the exigencies of life have produced, but which claims no fixity of tenure in the constitution.

The age of forty arrives; it passes; the nervous system begins to lose by degrees its sensibility and its activity, and the muscular system its power. Innervation observes a corresponding decline; exercise is diminished; the respiratory muscles manifest less power in expanding the chest; less air than formerly enters the lungs; aeration of the blood is imperfectly accomplished; an excess of carbon accumulates therein. This accumulation of carbon may be either further favoured or entirely produced by the constant breathing of air vitiated by carbonic acid, or by food which is imperfectly digested and assimilated, and frequently by alcoholic drinks, the use of which has become too constant a habit.

Disease which prostrates both the nervous and muscular systems produces the same result. It, in fact, by debility of the respiratory muscles, reduces the efficiency of respiration to the level of old age. It may even do more than this. If the disease affects the lungs, the liver, the kidneys, or any great extent of the skin, the carbon usually excreted by these organs is thrown, if not wholly, at least in part, upon the blood, which may thus become so charged with it as to prevent the removal of the carbon of the muscular fibre during the process of the oxidation of the body.

Fatty degeneration of the heart finds, therefore, its predisposing cause in a diminished vitality induced by age, by habit, or by disease; its determining cause, in an excess of carbon in the blood, by which the removal of the carbon of its muscular fibre, in the oxidation of the latter, is prevented. Hence the recombination of the residual elements of its muscular fibre—carbon, hydrogen, and oxygen—in the form of fat, which now appears as globules or mere molecules of oil within the sheath of the sarcolemma.

The subjects of fatty degeneration of the heart are, perhaps, more frequently than otherwise the subjects of fatty deposit throughout the body generally. We know that, in many instances, there is a constitutional predisposition to the deposit of fat—that it passes from parent to offspring through many generations. With this constitutional proclivity to the deposit of fat is there, then, a similar constitutional tendency to fatty degeneration? Not necessarily so. When fatty degeneration and fatty deposit are associated in the system, the decline of life has almost invariably been reached. At this period the conditions of life are, as I have already shown, favourable to the accumulation of carbon in the blood, and the consequent retention of carbon in the metamorphosing muscular fibre. Fatty deposit in the body favours immensely these conditions. A thick layer of fat super-imposed upon the muscles is to their action as a brake is to a carriage-wheel. It retards motion; it begets indisposition to exertion; it diminishes the oxygenation of the body. The respiratory muscles, labouring beneath a heavy burden of fat, cannot pull up the ribs and expand the chest sufficiently to admit a necessary quantity of air into the lungs. The test of the spirometer often declares that a less volume of air is expired under a forced effort by a chest thus encased in fat than by tuberculously diseased lungs under the same circumstances. The interchange between the carbonic acid in the blood and the oxygen of the air is consequently reduced below the healthy standard. What is the result? An excess of carbon in the blood; a diminished oxidation of the carbon of the metamorphosing muscular fibre; its retention within the sarcolemma; its recombination there with hydrogen and oxygen; and the replacement in consequence of the sarcous elements by fat. Fatty deposit, then, promotes fatty degeneration; but it does not prove that the latter is at all engrafted upon the constitution.

What practical bearing have these facts on diagnosis?

They show that a heart affected by fatty degeneration loses power in proportion to the degeneration which its muscular fibres have undergone. The extent of degeneration may be small, or it may be considerable. If small, the proportionate loss of power in the heart may not be appreciable. If considerable, it will be found in a modification of the heart's contraction.

A heart thus affected contracts feebly and often slowly. Its loss of contractile power diminishes the natural force with which the blood leaves the ventricles. The direct consequence is a reduction in the pitch of the sounds of the heart, which to the ear of an observer are rendered low and apparently distant. Another result of this feeble contraction is—a diminished volume of blood thrown by each effort of the left ventricle into the aorta; a diminished pulse-

wave propagated to the distant arteries; a smallness, softness, and feebleness of the radial pulse. A heart thus reduced in power cannot maintain a vigorous circulation through the peripheral vessels. The blood moves slowly and in diminished quantity through the vessels of the brain, and a feeling of faintness, from the loss of the healthy stimulation and nutrition of the brain-substance, is the result. For the same reason the temperature of the extremities is generally low. If in this condition of the heart the body be raised suddenly from the recumbent to the erect position, death may occur instantly. The heart, scarcely able to maintain the peripheral circulation even in the recumbent posture, is utterly overpowered when it is suddenly required to throw the blood against the force of gravity to the brain. The blood fails to reach the cerebral vessels; they collapse; the patient faints, falls, and dies! This is the explanation of many deaths from fatty degeneration of the heart occurring in the early morning. The night is passed in sleep; the bladder during this time becomes distended; the patient awakes; he feels at once the desire to void urine; he rises before his system has had time to throw off the lethargy of sleep to obey the call; the heart fails to drive the blood in sufficient quantity to the brain; quick, almost instant death is the result.

Such patients ought never to quit the recumbent posture immediately after waking—ought never to resume the erect position until the body has been refreshed and invigorated by the natural stimulus of food.

At other times death is brought about in a different manner. Fatty degeneration, in islets or patches, has extended through the whole, or nearly the whole, thickness of the heart's walls; a sudden exertion is made by the patient; an increased effort is demanded of the heart; it responds to the solicitation conveyed to it by an increased pressure of blood, but in doing so it ruptures;—the rest is known! As the degeneration of its walls progresses, and as the heart loses power, its cavities may become dilated, and its valves incompetent, thus leading to regurgitation through the orifices which they guard, and to a back-flooding upon the venous system of the body. If the mitral valve is thus rendered unable to close its aperture, the back-flooding is in the direction of the lungs; if the tricuspid, the back-flooding is in the direction of the general system. Hence, in connexion with mitral incompetency, secondary consequences in the lungs, and their propagation backwards to the right side of the heart; in connexion with tricuspid incompetency, secondary consequences in the brain, liver, stomach, spleen, kidneys, and the other parts of the body. Every organ thus flooded expresses its disturbance by perverted function. The converse of this is alike true. Every organ to which the fatty heart is unable to drive the blood in sufficient quantity has, in like manner, its function disturbed. In the erect posture the heart has more difficulty in filling the cerebral vessels than it has in effecting the peripheral circulation of the other parts of the body. The force of gravity opposes the ascent of blood to the brain. This opposition may be either moderately overcome, barely overcome, or not overcome at all by a fatty heart. The cerebral manifestations will be accordingly. When the force of gravity is moderately overcome, there will be no particularly marked cerebral disturbance. When it is barely overcome, rapid exhaustion on exertion, faintness, giddiness, spectral illusions, confusion of ideas, temporary paralysis, occur. When it is not overcome at all, death is the result. But paralysis is not always temporary. When not, it depends upon extravasation of blood at some point of the cerebral mass. At this point an examination of the cerebral vessels detects the same kind of fatty degeneration in their coats as exists in the muscular fibres of the heart. One or more such vessels have ruptured; blood has escaped; the pressure of it upon the surrounding brain-substance produces the paralysis. How has this rupture been caused? The power of the heart, by reason of the fatty degeneration of its walls, is not now equal to its power in health; the blood, therefore, has not been thrown to the brain with its original force, and yet one or more of the cerebral vessels have been ruptured. The rupture is, notwithstanding, due to an increased pressure of blood upon the cerebral vessels; but this increase is rather *relative* than *real*. The heart has been weakened by fatty degeneration; the vessels of the brain have been weakened by the same cause. The latter are able to bear the pressure of blood produced by the heart under ordinary circumstances; they are able to bear so much pressure, and no more. The maximum of pressure which they can bear is below that of health, as the maximum power which the heart can exert is below the standard of health. But the heart may not have suffered degeneration in the same degree as the cerebral arteries. If, then, the heart is suddenly urged by any unusually exciting cause, it contracts for the moment with more energy; an increased pressure of blood is instantly thrown upon the cerebral vessels, and their rupture is the consequence.

Rupture, however, of the cerebral vessels may, according to Dr. Quain, have a somewhat differently determining cause. Instead of being due to the direct pressure produced by the *onward* flow of blood from the left ventricle, it is produced by *backward* pressure directed from the right side of the heart. According to the view of this eminent physician, the right heart is, by reason of its degeneration, unable to accomplish the pulmonary circulation sufficiently effectively to dispose of all the blood reaching it from the head and other parts of the body. A back-flooding therefore takes place upon the venous trunks. This propagates itself to the vessels of the brain, which become over-distended, and, remaining distended, ultimately burst. Meningeal apoplexy is more particularly the form of hæmorrhage which is thus produced.

Without the co-existence of tricuspid or pulmonic valvular incompetency, I should scarcely expect this condition of the right side of the heart to produce the effect upon the cerebral circulation which has been ascribed to it, because the power of the heart, and, probably, the frequency of its action, would be reduced in proportion to the degeneration of its muscular fibre; the volume and velocity of the blood sent to the brain would be reduced in a corresponding ratio; the return of blood from the brain would be in proportion to the supply; and, being below the quantity of health, the right cavities of the heart would not be flooded. Add, however, to the debility of the right heart tricuspid or pulmonic incompetency, and there is at once established a direct obstacle to the return of blood from the head; because the volume of blood leaving the right ventricle is, in the case of an incompetent tricuspid valve, projected in part into the right auricle, in which it meets the blood coming from the head and other parts of the body, and from which it causes a refluent wave upon the great venous trunks, thereby propagating its influence to the vessels of the brain, and thus causing their distension. In the case of pulmonic valvular incompetency, the blood, projected by every contraction of the right ventricle into the pulmonary artery, would, in like manner, fall back in part into the ventricle, in which it would meet the returning blood coming from the right auricle, and thus cause a back-flooding upon the great venous trunks and their tributaries, as already described.

But now comes the very important and practical question—Can fatty degeneration of the heart be diagnosed during life? In some instances of its existence it can. In other instances it cannot. Where the extent of degeneration is so limited as not to affect the contractile power and movements of the heart, it is impossible to diagnose with certainty the existence of this change. When, however, the degeneration is sufficient to weaken the natural force and movements of the heart, this altered condition of its muscular fibres admits of recognition.

The pure and simple indications which lead to this knowledge are—a feebleness of the heart's contraction; diminished impulse and sounds of the heart; great tendency to syncope, especially on exertion; a small, feeble, and often slow pulse; breathlessness on moving; early exhaustion on exertion; and a tendency to loss of temperature, especially in the extremities.

If with these conditions there exist the *arcus senilis* in the cornea, a large, soft, fat, pluffy body, and middle or advanced age, the heart's condition may be safely diagnosed as one of fatty degeneration.

(To be continued.)

NAVAL MEDICAL SUPPLEMENTAL FUND.—At the quarterly meeting of the directors of the Naval Medical Compassionate Fund, held on the 8th inst., Dr. J. W. Johnston, Inspector-General, in the chair, the sum of £75 was distributed among the various claimants.

A CASE OF

LUPUS OF SEVEN YEARS' STANDING SUCCESSFULLY TREATED BY LARGE DOSES OF IODIDE OF POTASSIUM.

BY ROBERT MUNRO, M.A., M.D.

IN the summary given in THE LANCET for Dec. 30th, 1871, of the medical events of the year, I find the following remarks:—"Iodide of potassium is doing wonders in the cure of diseases probably syphilitic; though, as Dr. Buzzard suggests, we are perhaps reasoning in a circle in setting down all diseases cured by iodide of potassium as syphilitic. The size of the doses taken, and apparently required, for the therapeutic effect is a very anti-infinitesimal sort of fact. Mr. Gay is curing a lupus of twenty years' standing with half-drachm doses three times a day, and Dr. Moxon and Dr. Anstie lately reported remarkable cases of syphilitic disease of the nervous system cured respectively by scruple doses and ten-grain doses three times a day." A description of the case of lupus here referred to will be found in THE LANCET for Dec. 9th, 1871, and Feb. 24th, 1872. Being somewhat interested in the effects of large doses of iodide of potassium, and happening to be in London for a few weeks while this case was under treatment, I had an opportunity, through the kindness of Mr. Gay, of seeing his patient. The cicatrisation was then nearly completed, and altogether the results of this drug appeared to me so eminently satisfactory that I resolved to try it on the first suitable opportunity. With the above facts already before the profession, I think the following case is worthy of being recorded, inasmuch as it is an additional evidence of the great value of iodide of potassium as a therapeutic agent in a class of diseases that have almost become an opprobrium to the healing art.

S. S——, a strong, muscular man, of a ruddy complexion, and twenty-seven years of age, consulted me about the middle of May, 1872, in regard to a lupus in his nose and face. The disease was of seven years' standing, and, besides involving the nose, the upper lip, the mucous membrane of the nostrils, and rather more than a square inch of the roof of his mouth, it extended in an irregular patch for about two inches down both cheeks. There was a slight but offensive discharge from the ulcerations, and his breath had a fetid odour, which I thought proceeded from the ulcerated roof of his mouth. He was dispirited about his case, as he had already consulted many of the most noted surgeons in this vicinity and in Glasgow without benefit. From a written account which he gave me of his own case, I could not gather much information in regard to his past treatment. Six years ago an eminent surgeon here recommended him to have the diseased portion removed by the knife, but this he declined. A distinguished professor recommended some ointment, which, he says, had no effect whatever on his face. Others told him it was cancer, and incurable. Latterly he fell into the hands of quacks, and had a plaster (probably arsenical) applied to the sore. In concluding his report he says: "I returned to Dr. ——— again, as I did time after time, as a fox to his hole for safety." No syphilitic history could be elicited. About a year ago I saw a woman here with psoriasis guttata, who had been taking arsenic for nearly twelve months without any benefit, except irritation of her eyes, but in a few weeks she got better under the internal administration of carbolic acid. This woman now turns out to be a sister of my patient with lupus. The patient also tells me that his father at certain seasons of the year had spots on his legs and arms similar to those I had seen on his sister. Thus psoriasis seems to have been in the family.

I at once commenced the treatment of the lupus by giving ten-grain doses of the iodide of potassium three times a day. On one cheek the disease was attached to the nose only by a narrow isthmus; and, wishing to observe the effect of a caustic on the sore, I brushed over the whole of this nearly isolated portion on the cheek by the acid nitrate of mercury. The crust dropped off in a few days, and left the sore with a much more healthy appearance. I then, at intervals of about a week, touched other portions of the disease with this caustic, until at the end of six weeks I had gone over the whole of the surface of the disease, so far as it manifested itself externally. Each crust was removed by poultices, and the sores then dressed with the following lotion:—Carbolic acid, three drachms; sulphate of zinc, eighteen grains; water, twelve ounces.

About three weeks after the treatment was commenced I increased the iodide of potassium to one-scruple doses three times a day, and added three drops of the liquor arsenicalis to each dose. The progress of the case was very satisfactory; and about the beginning of August the patient's face was completely skinned over, and since then it has remained perfectly well.

I showed this case to various medical men, who all expressed themselves as highly pleased with the result; and on the 23rd of August to Mr. Gay, who happened to be in the neighbourhood, and who gave a highly favourable opinion as to the permanency of the cure. Up to this date (Sept. 16th) the cicatrices are becoming more of the colour of the skin, and there is not anywhere the slightest appearance of a recurrence of the disease.

Observations.—The *post hoc propter hoc* in the above case may appear somewhat doubtful, but for the following reasons I am of opinion that the iodide of potassium was the curative agent:—

1. The roof of the mouth and mucous membrane of the nostrils began to improve at an early stage, and ultimately became quite healthy, although no external treatment was used.

2. I am led to believe that arsenic was previously repeatedly tried in the case without any benefit; besides the small quantity used on the present occasion could hardly have the effect.

I have no doubt the acid nitrate of mercury assisted the favourable action of the iodide of potassium, by correcting morbid action in the sores. A few weeks after the patient commenced to take scruple doses of the iodide of potassium some red papular spots appeared on his neck, head, and body, but they did not cause any annoyance. Otherwise I have not observed any constitutional effects from the use of this drug, though it was administered for nearly three months.

Kilmarnock, N.B.

UTERO-PERITONEAL FISTULA.

BY LAWSON TAIT, F.R.C.S.

IT is somewhat singular that, in the short time which has elapsed since the publication of my last case, I should have had two other cases of this singular condition under my care at the Hospital for Women. We know so little about it at present that I shall content myself with merely narrating the cases, reserving my comments until my experience shall have grown.

Lucy K——, aged twenty-six, applied at the hospital on March 22nd. She is the mother of four children, the last having been born five months previous to my seeing her. Since that confinement she has menstruated profusely, every month, for eight or nine days. The cervix was open, and, as I regarded the case as one of ordinary sub-involution, I passed the sound, on her second visit (April 5th). The sound passed straight up to the umbilicus without a hitch, and could be made apparent under the abdominal walls at almost any point. The uterus could not be felt above the pubis, and between the hands it felt very little larger than normal. The sound seemed to emerge from the middle of the fundus. The cervix was in a peculiar granular condition, and little pieces could be picked off by the nail, conveying a feeling to the finger, not of malignant disease, but of something with which I have not met before. Under bromide of potash she improved so that in April she menstruated only five days and not profusely. I saw her last on June 21st, when she was menstruating in normal quantity.

Sarah S——, aged thirty-three, has been married for seven years, and is the mother of four children. The last was born twelve months previous to her first visit to the hospital, and on that occasion her confinement was of longer duration than usual, her recovery was slow, and ever since

she has had a profuse purulent discharge. The uterus is fixed, and a firm immovable mass occupies the whole of the pelvis, being felt all round the uterus, in the bladder and in the rectum. The cervix is retracted, and the os feels only like a pimple, though quite open. I cannot give any reason for my suspicion, but before I passed the sound I entertained the belief that in this case it would pass into the peritoneal cavity, and the extreme care with which I introduced the sound was remarked by our resident medical officer, Mrs. Louisa Atkins. The sound passed straight up to the neighbourhood of the umbilicus, and was there felt under the integuments, and its point could be made to travel freely about. I have repeatedly passed the sound in this case into the peritoneal cavity, and I find it always goes in one particular track, and in that direction no exertion whatever is needed to pass it. I passed it this morning (Oct. 5th) in presence of my colleagues, and they had no doubt of the existence of a fistulous track.

Two explanations of this case have offered themselves to me. The first was that it might be a case of encephaloid cancer, the fundus uteri or part of it having been destroyed by ulceration. The alternative was that it was a case of suppurating hæmatocele, which had burst in two directions and left a fistula. To this latter view the progress of the case has driven me, and I am glad to find that my colleagues support me in it. The feeling of the tumour is not that of so large an extension of malignant disease. It has not interfered with neighbouring organs. The discharge is purulent, though on microscopic examination some epithelial-looking cells have proliferated nuclei which are suspicious; and the patient does not look cachectic. Moreover, she is improving under treatment. An interesting point in this case is that almost certainly a large amount of purulent fluid has found and does now find its way into the peritoneal cavity without doing any apparent injury.

In neither of these cases does the passing of the sound give rise to pain or trouble of any kind.

Great Charles-street, Birmingham.

ON THE

VALUE OF THE HYDRATE OF CROTON CHLORAL IN PAINFUL AFFECTIONS OF THE FIFTH NERVE.

By J. WICKHAM LEGG, M.D.,
CASUALTY PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL.

It is perhaps surprising that a remedy whose action was several months ago declared to be of so extraordinary a character should have received so little attention at the hands of the profession, especially when this new medicine promised to be so efficient a weapon against some of the most painful diseases known to physicians. Beyond one or two pharmacological notices, the substance seems to have been altogether passed by.

The hydrate of croton chloral was made by Krämer and Pinner, by the action of alkalies upon dichlorallyl and formic acid. Its physiological action was investigated by O. Liebreich. He found that in animals it produced a deep anæsthesia of the head, without any loss of sensibility of the body. Death was caused by a paralysis of the medulla oblongata. In man, an anæsthesia of the fifth only was noticed. The sensibility of the trunk, and the pulse and respiration, remained unaltered.

Having procured some of this substance, I determined to make observations upon such of my patients at St. Bartholomew's as appeared likely to be benefited by the use of the medicine. I gave it to about twenty persons, nearly all women. They varied in age from seventeen to forty-four. They were all suffering pains in the regions supplied by the fifth nerve—that is, the upper and lower jaw, the face, and the supra-orbital region of the forehead. The pains were paroxysmal. In the majority of the cases they were increased at night. In nearly every one of these cases there was caries of the teeth. In about half there were signs of anæmia. The medicine was given in doses of five, ten, and twenty grains, dissolved in water. It was given at night, just before going to bed. In one case, where the pains became aggravated at noon and at bedtime, it was given just before the increase of pain was expected. In all the patients, except two, great relief from pain followed the dose of croton chloral. Some of the patients said that they slept well after it; others, that they did not sleep, but that the pains in the head and face either ceased altogether, or were much diminished. In two cases, both women, the croton chloral was of no use whatever, the pains being aggravated during the use of the medicine; but in the rest of the cases more or less relief was given.

Should the croton chloral be as efficient in the hands of others as it has been in mine, it will prove a most important addition to the Materia Medica. It will enable the physician to give relief from pain until relief can be afforded by the dentist, or by attention to the general health, and this without any of the general effects of narcotics. It is almost unnecessary to dwell further upon the advantage of possessing such a means.

I may conclude by stating that Messrs. Evans and Leschner, of Bartholomew-close, keep the hydrate of croton chloral in stock.

Green-street, Park-lane.

HYDROCELE OF THE SEMINAL VESICLE.

By N. R. SMITH, M.D.

Diseases of the seminal vesicles have received very little attention from pathologists, probably because of their obscurity and infrequent occurrence. There is an excellent, but brief, article on this subject in Holmes's System of Surgery, by George M. Humphry, but he does not mention the affection which I am about to describe, nor have I noticed it in any other author. The seminal vesicle is wrapped in an envelope similar to that of the ovary, and is cellular in structure. We should not be surprised, therefore, to find it similarly affected in disease.

Some twelve years since I was called to a case (in consultation with Dr. B——, of the city of Baltimore), represented to be one of retention of urine. I found a large pyriform tumour occupying the cavity of the pelvis, and also that of the abdomen, higher than the umbilicus. There was no gaseous resonance over any part of it, but when percussed it sounded and vibrated like a fluid in a tensely distended sac. The patient was passing, every hour, half an ounce of urine perfectly normal in character. The attending physician assured me that he had repeatedly introduced the catheter into the bladder and had drawn not more than an ounce of urine; not in the least reducing the volume of the tumour.

Still I had not the slightest doubt that I was dealing with a distended bladder. All surgeons are aware that when the bladder becomes greatly distended it ascends into the cavity of the abdomen, the prostatic and membranous portions of the urethra becoming retracted and elongated, so that an ordinary catheter may be introduced its whole length, and its point not pass the uvula of the bladder, and no urine flow. The fact that urine was dribbling away involuntarily, from time to time, is also well known to be a common occurrence when the bladder is distended.

I had had not long before committed to my care from the country a gentleman who had been suffering from distended bladder. His country physician wrote me that he had repeatedly introduced a catheter fairly into the bladder and not a drop of urine had flowed. He was quite indignant at my opinion that the bladder had not been reached, and equally astonished when I introduced a long and large catheter and drew off some five pints of turbid urine.

In the present case, then, I had at first no doubt that I should find the bladder distended. I was greatly surprised, then, when on introducing a long catheter fairly into the bladder there flowed only an ounce of perfectly normal urine. On placing my hand on the tumour I found it not in the least reduced in size, and, as I moved the catheter, I distinctly felt the instrument gliding about in close contact with the walls of the belly, being pressed forward by the pyriform tumour.

Here, for a moment, we were completely at fault—the tumour was not the distended bladder, but was manifestly a cyst, containing a fluid. It was posterior to the bladder, and displaced that organ forward. After another careful exploration externally, I introduced my finger into the rectum, and found the prostate normal; but on carrying the finger deeply and to the left of it, I at once encountered an elastic tumour communicating the sensation of a sac tensely distended with fluid. On palpating with the other hand on the abdomen, the vibratory motion of a fluid was manifest.

The matter was now clear. We had a hydrocele of the left seminal vesicle. We at once resolved on tapping through the rectum. This I effected with an ordinary straight trocar. On withdrawing the stylet, the fluid issued with force, and in a few minutes we drew off ten pints of a brown serous fluid, bearing no resemblance to urine.

No unpleasant symptoms followed, but in some four weeks it again filled, and was tapped by my colleague in the case. After this there was no recurrence.

A correct diagnosis was certainly, in this case, a matter of vital importance. Had the disease been regarded as dropsy of the abdomen, and tapping had been practised below the umbilicus, one of two disasters might have followed. Some portion of the fluid would have flowed into the peritoneal cavity, and might have caused fatal peritonitis. There would have been danger also of perforating the bladder, which was flattened against the anterior walls of the belly.

The facts which I have related will, I trust, aid some professional brethren in diagnosing a case of such rare occurrence.

Baltimore, U.S.A.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

DISEASE AT THE UPPER END OF THE FEMUR; AMPUTATION THROUGH THE NECK OF THE BONE; DEATH.

(Under the care of Mr. HENRY SMITH.)

THE following case—for the notes of which we are indebted to Mr. William Rose, house-surgeon—is as interesting pathologically as it is surgically. It shows that, notwithstanding extensive disease in the bones of the leg and great constitutional depression, the reparative processes may be tolerably active. After the excision of the knee-joint was performed union of the bones readily ensued; and even with such severe disease of the femur which latterly presented itself firm bony anchylosis took place in the hip-joint. For the surgeon such a case is full of painful interest, for without operative interference death is almost inevitable, while the prospect of success after a capital operation is small.

The patient, a pale and emaciated young man, aged nineteen, was admitted several months ago with disease at the upper end of the right femur. Eight years ago he underwent excision of the right knee-joint for long-standing disease. The bones united, and the limb was a very useful one till about April last, when inflammation came on in the hip of the same side and a large abscess formed in the thigh, and on examination it was found that about four or five inches of the whole thickness of the shaft of the femur below the neck had necrosed. The dead bone was removed towards the end of August last. Amputation was thought of then, but, as the patient was in such a low condition, it was deemed advisable to defer the major operation till his health improved. After the removal of the necrosed portion of bone the patient's condition improved, and on the 28th ult. amputation through the neck of the femur was performed in the following manner. Chloroform having been administered, the femoral artery was compressed by means of the thumb against the pubes; antero-posterior flaps were then made by transfixion and the limb was removed, there being no necessity for the saw. Very little blood was lost, but several vessels were ligatured with whipcord. The joint was not opened, and the head of the bone, appearing healthy, was not disturbed, but a small portion of the necrosed neck was clipped off with the bone forceps. The surfaces of the flaps were washed with simple water and then brought together, the lips being fixed with several whipcord sutures at the front and inner part, the outer extremity of the wound being left open; the flaps were then supported by strapping, and pads of lint fixed with a spica bandage.

After the operation Mr. Smith remarked that there was no alternative in this case but amputation, as union was impossible with so much of the shaft of the bone gone; further, an examination of the bone after removal of the limb showed what remained of the femur was so diseased that nearly the whole of the remaining portion would have had to be taken away. There was also necrosis in the seat of the old excision of the knee-joint, and there was disease of the lower end of the tibia of the same side.

For two days after the operation everything went on as well as could be expected; but on the 1st inst. the patient complained of feeling cold, but he did not shiver. Temperature 105° F.; pulse 144. Well-marked venous pulsation in the neck; face flushed; tongue foul.

Oct. 2nd.—Temperature 99° Fahr.

3rd.—Very sick after food; aspect livid; pulse weak. To have half an ounce of brandy every half hour. This produced such a good effect that in five hours it was reduced to ten ounces in the twenty-four hours.

4th.—Thin offensive discharge from the stump.

5th.—Had a slight fit this morning, lasting about five minutes, the muscles of the face and lower jaw being thrown into a state of spasm, and the tongue bitten. Patient complained of feeling cold for about fifteen minutes, but there was no actual rigor. Temperature 98·2°; pulse 104.

6th.—Temperature 101°; pulse 136; respiration 36; venous pulsation in the neck well marked; great drowsiness. There is slight loss of power in the right arm. Brandy to be increased to sixteen ounces.

7th.—Temperature in the morning 97·5°; pulse 128. Patient gradually sank, and died at noon.

Autopsy, twenty-four hours after death.—All the viscera were pale, flabby, and fatty. No evidence of amyloid degeneration, and no abscess in any of the viscera. The surface of the flaps were adherent throughout, and on cutting down to the joint it was found that bony anchylosis existed between the head of the femur and the acetabulum at the posterior and outer parts. At the inner side of the head of the bone was a cavity large enough to contain the last phalanx of the forefinger, but there appeared to be no actually diseased bone present; the remaining portion of the head of the femur and the acetabulum were smooth and covered with cartilage.

ROYAL FREE HOSPITAL.

CANCER OF THE GALL-BLADDER.

(Under the care of Dr. RICHARDS.)

JAMES E——, a cabinet-maker, aged fifty, was admitted on July 5th, suffering from dyspepsia and jaundice, the latter of three weeks' duration. Vomiting and emaciation were soon added; and then two tumours were felt: one at the lower part of the epigastric region, near the left costal cartilages; the other below the false ribs, in the right hypochondrium,—both causing aching pain and tenderness on pressure. The jaundice persisted, vomiting was so bad that hardly anything was retained, and emaciation and weakness increased until death, which occurred at the end of the sixth week after admission. During the last few days of life there was general abdominal tenderness.

At the autopsy, scirrhous thickening with ulceration of the pyloric end of the stomach, and scirrhous induration of the head of the pancreas, were found to have caused the lump at the epigastrium. The lump in the right hypo-

chondrium consisted of the gall-bladder so enlarged and distended as to bulge forward from the under surface of the liver, forming a pear-shaped tumour at the edge of the right lobe. Externally, the gall-bladder was uneven, and of a reddish-yellow colour. On section, broken-down cancerous material, of a pinkish-red colour, oozed out; inner wall of gall-bladder thickened and eroded; cystic and hepatic ducts blocked up and solidified. The liver was shrivelled and atrophied, but with no trace of cancerous deposit; and, on section, bile exuded from its substance. The intestines were matted together by recent adhesive lymph and pus. No infiltration of the abdominal glands or other organs. Juice from sections of the pylorus, pancreas, and gall-bladder exhibited under the microscope characteristic cancerous cells (of various shapes and sizes, with nuclei, nucleoli, and granules). On teazing out fragments from the diseased parts, the above cells were seen imbedded in a fibroid stroma.

Dr. Rickards remarked that during the early part of the illness, although there were strong suspicions of malignant disease of the stomach and liver, yet there was nothing to form the diagnosis upon except persistent unaccountable jaundice, with occasional vomiting. When the abdominal walls became flaccid, and the diseased growths could be felt, the liver was considered involved, whereas it turned out to be the gall-bladder transformed into a fungus hæmatodes. The abdominal pulsation over the epigastric tumour where it compressed the aorta was highly marked, but the other symptoms of aneurism were absent. Latterly, the stomach retained bottled ale better than anything else, solid or liquid.

ROYAL LONDON OPHTHALMIC HOSPITAL.

BLACK DISCOLORATION OF THE EYELIDS, DUE TO ARGENTIC CHLORIDE.

(Under the care of Mr. HULKE.)

FROM time to time, at long intervals, a few cases have been recorded of black discoloration of the eyelids. The subjects have mostly been young and interesting women, whose condition has generally excited much sympathy, and has not seldom baffled all attempts to trace its origin, and obstinately resisted every curative measure. Some—especially dermatologists—have referred the discoloration to a disorder of the sweat glands, others to the sebaceous glands, whence it has obtained the names chromhydrosis and stearrhœa nigricans; others again have looked upon it as a feigned disease, and with greater probability have suspected the surreptitious application to the skin of carbonaceous matters. In the following case the fraud was too palpable not to be detected. A well-grown, good-looking servant girl, aged fifteen, came to the out-patients' room on the 9th of March with a peculiar blackness of the lower eyelids, both being coated with black films of exfoliating epidermis. The appearance was just that which follows the light application of nitrate of silver to the skin, as recommended by some to allay the light-shyness in strumous ophthalmia. An analysis of a film of the blackened cuticle by a most competent chemist proved the presence of argentic chloride.

The affection began, the girl said, six weeks before as a slight darkness, which in three or four hours increased to an intense blackness. This lasted three or four days, when the cuticle began to peel off, leaving the skin beneath clean and tender. Three attacks of this kind had occurred during the six weeks. She positively asserted that she had not put anything to her eyelids, and as strongly asserted that she had not been the subject of a practical joke by her fellow-servants. How much these statements are worth we leave our readers to decide.

YORK COUNTY HOSPITAL.

CASES OF TETANUS.

FOR the following notes and remarks we are indebted to Mr. Frank H. Hodges, house-surgeon.

(Under the care of Mr. HORNBY.)

Traumatic tetanus; death.—J. G——, aged thirty-two, a leather-dresser, had been attending the hospital as an out-patient with compound dislocation of the little finger, occasioned by a fall, which had been treated antiseptically, but, having become gangrenous, the finger was amputated on Feb. 7th. Everything went on apparently well till the morning of the 10th, when the patient complained of rigidity of the neck and slight difficulty in opening the mouth and in swallowing. The symptoms having greatly increased in severity, he was admitted into the hospital at 12 P.M. of the same day, when the temperature was 97·3° F.; pulse 76; respiration sighing and prolonged. The mouth could be opened just sufficiently wide to allow of the tongue being protruded; there was no pain except such as was caused by slight stiffness of the neck and cramps about the jaws. A little brandy and milk were given, and a quarter of a grain of morphia and the sixtieth of a grain of atropine injected subcutaneously.

Feb. 11th.—The subcutaneous injection was repeated at 2 A.M., and after this the patient slept till 5 A.M. The tetanic spasms were as yet mild, but did not cease during sleep.—At 11 A.M. Mr. Hornby ordered twenty grains of chloral hydrate to be given every four hours, a poultice to be applied to the stump, strong beef-tea with brandy *ad libitum*.—2.30 P.M.: An ice-bag applied to the spine, and a turpentine enema administered.—10 P.M.: Ice-bag removed; enema has acted once. Temperature 98·2° F.; pulse 88; respiration 12. The spasms are increasing in severity; the expression is now anxious; cannot protrude tongue. There is extreme difficulty in swallowing. To have an injection every four hours, consisting of half an ounce of brandy, two and a half ounces of beef-tea, and twenty drops of tincture of opium.

12th.—Slept from 2 A.M. till 4.30 A.M., when, during a paroxysm, he bit his tongue, which bled freely; dozed at intervals till 7 A.M.—9.45 A.M.: Temperature 99·2°; pulse hard, 120. Abdominal muscles rigid, and since waking patient has had several attacks of opisthotonos; risus sardonicus well marked.—7 P.M.: Patient violently convulsed; opisthotonos lasting over half an hour.

13th.—Morphia repeated at 1 A.M., and at 2 A.M. an injection consisting of six teaspoonfuls of brandy, an ounce and a half of beef-tea, and twenty drops of tincture of opium, was given.—5.45 A.M.: A favourable turn seemed to have taken place, and patient swallowed with ease two ounces of sago water and half an ounce of brandy.—9.30 A.M.: No pain; can open jaws sufficiently wide to protrude the tongue. Temperature 99·2°; pulse 146; respiration 24. This state of things lasted till 4 P.M., when difficulty of swallowing returned, accompanied by hiccough.

14th.—2 A.M.: Patient rapidly sinking and unconscious. Pulse 160; respiration 40. Opisthotonos very violent about every half-minute.—At 5.30 A.M. death took place.

Tetanus; recovery.—W. T——, aged forty, suffered a fracture of the thigh in October, 1871. For this he was in the hospital three months, convalescence being delayed by a slough appearing on the heel. About the middle of January last he was discharged, but the sore was not quite healed. His health, however, not being good, it was deemed advisable for him to leave the hospital. The sore remained much the same till a few days before readmission, when it became worse; and on the morning of March 1st a twitching sensation, which rapidly increased in severity, came on in the leg.

On admission, March 2nd, a spasm of the diaphragm occurring about every five seconds, and emprosthotonos, accompanied by drawing up of the affected leg, were noticed. Temperature 98·4°; pulse 80. Thirty grains of chloral were given at once, the patient soon going off into a comfortable sleep.—At 8.30 P.M. one drop of nicotine, with an ounce of starch, was ordered to be injected into the rectum every four hours. The patient was sick almost immediately after the injection, and then slept, the spasms ceasing. Sickness occurred after every repetition of the injection. A charcoal poultice to be applied to the sore.

March 3rd.—Patient has dozed all night; takes all the milk and brandy given him; the spasms of the diaphragm still continue; temperature 99°; pulse 92. No implication of the cervical muscles or those of the jaw. Nicotine to be reduced to half a drop.—10.45 P.M.: Has not vomited since the last enema; symptoms remain unchanged.

4th.—Had a good night; abdominal muscles somewhat rigid. Ordered three grains of mercury with chalk, half a drop of croton oil, and five grains of compound colocynth pill: to be taken at once.—9 P.M.: Bowels moved once;

abdominal muscles less rigid. Had a castor oil and turpentine enema, which acted freely.

5th.—Had thirty grains of chloral at 1 A.M., and slept without spasms till 5 A.M. Nicotine enema repeated at 9 A.M., but patient was sick an hour afterwards. Nicotine to be discontinued.

From March 6th the patient steadily improved. Thirty grains of chloral were given as required, and always had the effect of checking the spasms for several hours; but for weeks after the patient could not get through the night without a dose. He was discharged, perfectly well, on the 27th April.

(Under the care of Mr. HUSBAND.)

Traumatic tetanus; recovery.—A schoolboy, aged thirteen, on Feb. 20th, while playing in a washhouse, fell over a tub, and the end of the right ring-finger, being caught between the moving cogged wheels of a washing machine, was lacerated and broken. The case was seen at once by the house-surgeon; but no serious symptoms were noticed till the morning of admission, March 1st, when the boy was found standing against the wall of the playground, with his back arched, and unable to move. He was admitted into the hospital at 1 P.M., when it was found that he could not open his mouth to the full extent, and the act caused pain. The patient complained of stiffness in the neck, but had no difficulty in swallowing. The injured finger was in a foul, sloughy condition, and the whole of the middle phalanx was necrosed. At 4 P.M. he had had four attacks of spasm of the facial muscles, the last two being much increased in severity. Chloroform was administered, and the finger amputated. He was now placed in a darkened room, and strict injunctions were given that no friend should be allowed to visit him. Temperature 100·2°; pulse 100; abdominal muscles rigid, with occasional spasm. Ordered one-quarter of a grain of morphia subcutaneously every four hours.

March 2nd.—Temperature 99°; pulse 100; respiration 20. Has had a good night. Pain and stiffness about the neck and the difficulty in opening the jaws have gone; abdominal muscles less rigid. Takes milk, brandy, and beef-tea freely. In the course of the afternoon he complained again of difficulty in swallowing. At 4 P.M. had a violent attack of opisthotonos, followed by severe spasm of the respiratory muscles. At 8 P.M. he was fully under the influence of morphia, which was now discontinued. Bowels costive. Ordered a purgative enema.

3rd.—Temperature 99·2°; pulse 108; respiration 20. Was quiet during the night, but did not sleep much; takes fluid nourishment well, and does not complain of pain; has occasional slight attacks of opisthotonos; finger dressed, and looks well; bowels have not been opened yet. Ordered half a drop of croton oil, to be followed by a dose of house-medicine; this acted freely.

4th.—Slept well during the night; had opisthotonic spasms at long intervals, but accompanied with very little pain.—8 P.M.: Temperature normal; complains of pain in the belly, which feels tense. Ordered a pill consisting of grey powder and compound colocynth pill, and to have a hypodermic injection of the sixth of a grain of morphia.

5th.—Temperature normal; bowels opened by two doses of house-medicine followed by a turpentine injection.—7 P.M.: Since 8 A.M. has only had one slight spasm.

6th.—Continues to improve, and takes solid food.

After this the patient had no further spasms, and left the hospital on April 4th, in perfect health.

Remarks.—It is worthy of note that these cases of tetanus occurred during cold and excessively wet weather. It will be observed that the symptoms in the first case occurred three days after the amputation and ten from the original injury; we may therefore conclude that the tetanus was the result of the laceration of the digital nerve at the time of the dislocation. The unusual and deceptive cessation of the graver symptoms, extending over eleven hours on the fifth day, is a point of considerable clinical interest. In the second case the local lesion was at the heel, and the symptoms of the disease were very mild. In the third case four well-marked spasms of the facial muscles had been observed before amputation was resorted to. It is doubtful, however, whether amputation, unaided by the exhibition of morphia and the general treatment, would have led to so favourable a termination.

HÔPITAL LA PITIÉ, PARIS.

IN the course of a recent visit to the surgical wards of La Pitié we observed various facts of interest.

(Under the care of Dr. S. DUPLAY.)

Case of Luxation of the External Semilunar Cartilage.—The patient is a man aged twenty-seven, formerly a soldier in the French army. Some time before the last war he had a fall in which the knee was subjected to violent distortion. It became swollen, and during three months it was treated by means of blistering and tincture of iodine. During the war the patient was made a prisoner, and whilst in Prussia he fell one day in about the same way as the first time, and heard a cracking noise in the knee. Blisters, frictions, and a season at Amélie-les-Bains were uselessly tried, and for a year no change has taken place in the knee. The appearance of the leg is quite normal. The joint has preserved all its movements; there are no signs of effusion, and no rise of temperature in the knee. When the patella is made to move between the condyles a feeling as of rubbing of rough surfaces is perceived, and when the knee is half flexed there is a cracking noise heard, whilst a foreign body is seen to bulge forwards. This foreign body is not an arthrophyte, or foreign body properly so called, and due to a disease of the cartilages as in dry arthritis; there are no signs of ossiform incrustation of the ligaments, &c. Neither does it present the appearance and circumstances of such portions of detached pieces of cartilage as are found in cases of traumatic lesions of the knee. Dr. Duplay thinks it is a case of luxation of the external semilunar cartilage, on account of the following signs: no foreign body can be made out, even on minute exploration; examination shows that an integral part of the joint moves out of place, and resumes its position as soon as a particular situation or point which stops its progress is passed; this point is the femoral condyle, which is altered, as is the patella; the bulging perceived during semi-flexion of the knee can be caused by the semilunar cartilage only.

Dr. Duplay will not interfere actively or employ immobilisation, as the joint enjoys all its movements. As palliative means he will use compression of the knee, local sulphurous douches, and iodide of potassium internally.

(Cases in the wards of Dr. LÉON LABBÉ.)

Dropsy of the Knee; aspirating puncture.—The knee was punctured during our visit. A very fine needle was used, and eighty grammes (not quite three ounces) of liquid ran slowly into the receptacle. The puncture was quite painless. Pressure was exerted over the knee, so as to assist the issue of fluid. After this the patella assumed its natural situation. The after-dressing consisted in a heap of cotton-wool and compression by means of cotton bands.

Dr. Labbé remarked that it would take weeks to get out such a quantity of serous fluid by means of blisters.

Fistula Ani.—The case had been operated on a few days previously, and was doing very well. Dr. Labbé called attention to the infundibuliform shape of the anus and the existence of a bridle limiting the anus in the direction of the perineum, both of which are considered characteristic of venereal habits.

Fracture of the Arm; employment of plaster splints.—Dr. Labbé frequently uses plaster splints in cases of fracture of the limbs, as they constitute a very simple and handy appliance. In cases of fracture of the leg, only one long plaster splint, extending along the posterior surface of the limb, and taking in the heel and sole of the foot, is applied. In the present case of fracture of the forearm, the splint was applied along the extensor surface of the limb, and another splint was rolled three times round the forearm, leaving bare the seat of the fracture. In the space of twenty minutes the plaster was quite dry, and the splint had become hard and solid. Two wooden splints had been applied to keep the arm immovable whilst the plaster was drying.

The splints are prepared very easily. They consist of a piece of tarlatan (muslin gauze), cut according to the required size, and folded eight times so as to obtain the necessary thickness. The plaster must be very fine—plaster-of-Paris (as used by moulders). It is thrown into plain water, and when the liquid has absorbed enough of it, so that any fresh quantity would flour the surface, the pre-

paration is of the necessary thickness. The splint is then soaked in the mixture and immediately applied.

Cysts of the Spermatic Cord.—The patient had a somewhat large cyst on each cord, so that the scrotum seemed to contain four testes. One of the cysts was punctured with a trocar in our presence. The liquid presented the appearance peculiar to spermatic cysts, and on microscopical examination was found full of living spermatozoids. A solution of tincture of iodine was injected.

Naso-pharyngeal Polypus in a girl of fifteen.—This was quite an unusual case of naso-pharyngeal polypus in a female. Dr. Labbé said he did not know of any other case on record. We saw the polypus operated on. The galvano-caustic knife was used, and the soft palate was slit neatly and quite clean. The tumour was then seen bulging forward, and was immediately removed by the galvano-caustic wire. No hæmorrhage took place. The patient bore the operation very bravely. The growth was of the size of a small hen's egg.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCT. 11TH, 1872.

SIR WILLIAM GULL, BART., M.D., F.R.S., IN THE CHAIR.

DR. SOUTHEY read a paper on

ACUTE RHEUMATISM WITH CEREBRAL SYMPTOMS AND HIGH TEMPERATURE TREATED UNSUCCESSFULLY BY COLD AFFUSION.

The author related the case of a well-built man, aged thirty-five, of highly nervous temperament, in the habit of drinking wine and beer, but not intemperate. This was his first attack of acute rheumatism. The rheumatic articular inflammations were not established until after he had been ailing for fourteen days, with a temperature ranging between 100° and 102·5°. The rheumatic symptoms were well marked. The invasion of several joints with swelling and redness, the tongue, the pulse, and the sweating, were highly characteristic. On the eighteenth day of illness pericarditis set in, the joint inflammation suddenly subsided, and delirium of a peculiar kind, preceded by head pain and obscurity of vision, presented itself; the temperature now ranged between 104° and 105° in the axilla for ten days, while twelve grains of quinine, from six to ten ounces of brandy per diem, and various opiates, as well as chloral, were administered with little sedative effect. Bronchial symptoms now ensued, with great failure of power, although food and stimulants were freely taken. Delirium, akin to coma vigil, still continuing, and his temperature marking 105°, the patient was immersed in a bath quickly cooled down from 96° to 71°. The effect was immediate dissipation of delirium, with reduction of temperature to 100·5°, followed by short repose; but, the bodily temperature quickly rising again, he was wrapped in a wet sheet and exposed to a temperature of 65° for an hour. After this his temperature fell, and remained between 101° and 102° for two days. Some rest was now obtained, the pulmonary symptoms were relieved, and respiration fell from 36 to 28 per minute. Subsequently the wet sheet was frequently employed on four occasions, as often as three times in the twenty-four hours, with invariable relief as to the delirium and subsultus. From the eighteenth day of his illness up to the fortieth quinine was given, in doses varying from twelve to twenty-four grains in the twenty-four hours, as well as brandy, from four to ten ounces, without noticeable good or ill effect. On the thirty-third day of his illness his temperature fell spontaneously to 100·5°; he was then quite rational for twelve hours, and there was a slight return of the rheumatic pains in the joints, which lasted, however, only for a few hours. The patient gradually sank with low broncho-pneumonic symptoms on the forty-second day of his illness. The post-mortem examination revealed that swollen condition of the glandular viscera ordinarily discovered after all acute febrile diseases, but no tubercle was discovered anywhere in the body, and no apparent mischief in the brain or its membranes. The author of the communication considered the case one of cerebral rheumatism, and thought that the cold-water treatment had prolonged life and relieved the delirium.

The PRESIDENT asked if, at the post-mortem examination, the bronchial system was found to have been involved, as it appeared to him that the matter had been overlooked.

Dr. BUZZARD asked the author whether it was not probable that the patient had been a hard drinker, and that hence some of the symptoms may have been those of delirium tremens; and Dr. SOUTHEY replied that he did not believe the patient drank to excess, inasmuch as a little alcohol affected him considerably.

Dr. WILSON FOX, in commenting upon the relations of delirium tremens to temperature, could speak only of fatal cases. He remarked, merely for the purpose of eliciting opinion, on the low temperature at which the cold affusion was used. He thought that the treatment should be adopted exclusively as an extreme measure, and the question was, should you wait until the temperature has attained what may be called at present a fatal height, say till it reaches 106° or 107°. He did not believe in fatality in acute rheumatism unless indeed 109° was reached; but it appeared that a case of Dr. Murchison's, with a temperature of 106·5°, is the highest recorded in which recovery naturally took place. He doubted very much whether death often took place from pericarditis, and thought, therefore, it was best, except in extreme cases, to watch the patient through the disorder, believing that the cold affusions did no good, and might cause bronchial complications.

Dr. WEBER thought the case before the Society different both from those of Dr. Fox and those that he (Dr. Weber) had met with, for the temperature was not at first high—101° to 103·5°, but suddenly rose to 108° and 109°, ending in recovery after a single relapse. The delirium also was different, and, he thought, if cerebral complications did not exist, the wet sheet was a good and successful plan of treatment.

Dr. THEODORE WILLIAMS said he had tried the cold affusion in three cases of phthisis without any subsequent symptoms of bronchitis, the water being heated at first to 85° and reduced to 72°, and the patient kept in the bath twenty-five minutes.

The PRESIDENT inferred that the case was one of typhoid rheumatism, and suggested that the sudden rise of temperature indicated an association with delirium tremens, as distinguished from acute rheumatism, which elicited from the author of the paper that his patient was in the habit of taking beer for breakfast.

A MEMBER remarked that successful cases had occurred with higher temperature than that recorded, and

Dr. WEBER said that usually the affection of the joints was slight before the head symptoms commenced, and increased in intensity as the latter diminished.

The PRESIDENT quoted the case of a lady, aged thirty-two, in which, with a temperature of 107·5°, a bath at 90°, cooled to 42°, was given, which brought the temperature down to 97·5°. The mind became clear, the joints were much relieved, the bath was repeated, and the patient is now convalescent.

Dr. GREENHOW also read elaborate notes of an interesting case of acute rheumatism with high temperature unsuccessfully treated by cold water.

Dr. WILSON FOX opined that we had yet a great deal to learn in the matter, for as prominent symptoms we had, firstly, a sudden rise of temperature, with little else, and secondly, a rheumatic pyrexia, ending fatally. He suggested that the best plan was to prescribe cold affusion as a means of conquering hyperpyrexia, waiting for the result; and that it was a moral duty to treat the patient with cold water when the temperature reached 107°. The real question, of course, to be decided is, do we avert death by cold affusion?

Mr. HULKE thought the treatment rough, and that cold air might be more easily applied. He had always, in surgical cases of hyperpyrexia, given large doses of quinine with good effect.

Dr. ANSTIE also asserted his belief in large doses of quinine in reducing temperature, and

Mr. COOPER FORSTER subscribed cordially to this plan of treatment in pyæmic hyperpyrexia.

Mr. GEORGE LAWSON said that patients usually died, although the temperature was lowered, and

Dr. GREENHOW, in reply, reiterated his faith in the cold baths, and said that, according to his belief, quinine did not affect temperature.

Reviews and Notices of Books.

The Beginnings of Life; being some Account of the Nature, Modes of Origin, and Transformations of Lower Organisms. By H. CHARLTON BASTIAN, M.A., M.D., F.R.S. In Two Volumes, with numerous Illustrations. London: Macmillan and Co. 1872.

[CONCLUDING NOTICE.]

THE second part of Dr. Bastian's work is occupied with the consideration of Heterogenesis, or the process by which already existing living beings give birth to wholly different forms that have no tendency to assume or revert to the parental type. The number of independent and credible witnesses who have observed phenomena of this nature is very considerable. Foremost amongst them stands Dr. Gros, whose paper, published thirty years ago, appears to have had less attention paid to it than it deserves, and has been exhumed by Dr. Bastian from the Bulletins of the Society of Naturalists of Moscow. Besides Dr. Gros, Mr. H. J. Carter, M. Nicolet, M. Trécul, Dr. Braxton Hicks, Mr. M. Johnson, Prof. A. M. Edwards, Dr. Schaafhausen, Prof. Agassiz, and many others are quoted as having observed isolated facts or groups of facts which are at present wholly inexplicable on any other theory than that of Heterogenesis.

To mention a few only of the curious cases that have been followed out. Dr. B. Hicks describes the gradual conversion of the contents of the cells of the alga-like roots protruded by mosses floating in water into a ciliated infusorian. Here the protoplasm and chlorophyll, retracting from the walls of the cell, become progressively discoloured, exhibit spontaneous movements resembling those of an amœba, and finally become coated with cilia. Mr. Carter describes similar changes occurring in the cells of nitella; the protoplasm here, however, breaking up into ovoid bodies with one or two cilia, which, after escaping from the cell, underwent active changes of form, and then, becoming stationary, developed into the well-known actinophrys sol of Ehrenberg. Nicolet has seen trichomonas subsequently undergoing transformation into actinophrys, and has observed amœbæ arise from minute fragments of chara. Dr. Bastian has himself traced very similar changes in nitella, vaucheria, and other algæ; in all cases what appeared in the first instance to be, and what there was every reason for believing really was, an essential constituent part of the vegetable undergoing certain changes resulting in the production of amœbæ and infusorial organisms hitherto and still regarded by physiologists as truly animal in organisation.

Chlorophyll vesicles appear to be peculiarly susceptible of such modification; and much evidence is adduced to show that diatoms and desmids—such, for instance, as navicula and closterium—are capable of being developed with great rapidity by the direct conversion of these coloured and fat-like corpuscles. Dr. Gros and Prof. Edwards have seen euglenæ arise from the individualisation of the cell contents of a conferva. And the euglenæ, again, seem capable of undergoing extraordinary modifications of form and structure: some resolving themselves into fungus-germs; others becoming converted into diatoms, desmids, and pediastrim; others into amœbæ, vorticella, and actinophrys, from which again the higher forms of ciliated infusoria, such as oxytricha, plæsconia, and otostoma, may ultimately proceed.

But this is not all. It further appears that many of these forms are convertible into one another. Thus M. Pineau has observed the conversion of vorticella into oxytricha; and M. Haime witnessed the metamorphosis of oxytricha into trichoda; whilst Dr. Gros states that it may be held as proved that the keroniæ, dilepti, oxytrichæ, and others, can become encysted and give birth to rotifers, and he has even seen the direct conversion of large euglenæ into rotifers of the most varied form and size. Similar evidence is supplied by Dr. Nicolet and by Dr. Bastian himself, the latter giving a circumstantial account of the development of the complex rotifer hydatina senta from green chlorococcus vesicles, from other specimens of which confervæ and ciliated infusoria were produced. Advancing a step further, he declares that he has seen the direct development of nematoids from some of the thick-walled resting spores of vaucheria, and he concludes by stating that the observations of Dr. Gros and himself tend to show that every one of the groups of the scolecidæ (including the acanthocephala, tæniada, trematoda, and turbellaria), together with some of the lower forms of the arachnida, as the tardigrada and some water-newts or acari, may be produced by a direct transformation of masses composed of the protoplasm and chlorophyll of nitella.

Such is an outline of the various facts that Dr. Bastian has accumulated in support of his position, that the elementary organism can be developed both *de novo* and from already living bodies by a process of conversion or metamorphosis. He points to the simplicity of form presented by the bacteria and torulæ, the constancy and rapidity with which they are produced in organic infusions, not only when freely exposed to the air, but when they have been placed in tubes hermetically sealed during ebullition, and when consequently all germs must have been destroyed. He dwells on the probability that exists of the more complex molecules of which organic as compared with inorganic substances are composed, producing more varied and at the same time more unstable combinations, the molecular changes within which and the reaction of which upon their environments, lead to those active movements which are generally recognised as the characteristic of life, and to the phenomena of growth, development, and multiplication.

In the concluding chapters Dr. Bastian discusses the bearings of Archebiosis and Heterogenesis on the Darwinian theory of evolution, and shows how readily facts may be explained that present almost insuperable difficulties on that theory. Prominent amongst them is the occurrence upon the globe at this very time, in incalculable numbers, of the Foraminifera, though these are also known to have been abundant and widely distributed at remote periods of geological time. On the evolution theory it is inconceivable that, if they proceeded from a common ancestor, the species should have retained its primeval simplicity, and not long ago, by adaptation to the variation of surrounding conditions, which must have been very great, by survival of the fittest, and by hereditary modification, have advanced in the scale of organisation, and have acquired considerable complexity of form and structure. If, however, such organisms are being constantly generated by the operation of the same forces that originally led to their production, the difficulty is solved; whilst in the wonderfully plastic nature of this colloidal basis of life we may dimly see possibilities of development in a vast number of directions, some of which come to a speedy termination, whilst others better adapted to surrounding conditions may have culminated in the dominant types of the present and past ages.

We cordially recommend Dr. Bastian's volumes to our readers as presenting by far the fullest exposition of the doctrines of spontaneous generation that has yet been published, and as containing views that will undoubtedly exercise a powerful influence on many departments of biology.

West Riding Lunatic Asylum Medical Reports. Edited by J. CRICHTON BROWNE, M.D., F.R.C.S.E., &c. Vol. II. London: J. & A. Churchill.

WITH the growth of our provincial medical schools and the development of local centres of observation and research we may expect the materials for sound scientific induction to be multiplied and the literature of the profession to be enriched. The provinces, indeed, are rapidly gaining upon the metropolis in the advantages and the facilities they offer to the medical student; and, to mention one out of many, the Leeds School affords excellent opportunities for his training. Among other features in its favour may be cited its proximity to the great lunatic asylum for the West Riding at Wakefield, an institution under the superintendence of a physician who is a lecturer in his own department at the Leeds School. From the cases in the asylum over which he presides he has enabled his assistants and his local brethren to amass materials for special investigations into the whole circle of psychological medicine—its pathology, its diagnosis, and its treatment. Many of these having taken the form of written expositions, it occurred to him that their publication in a collective form might be desirable; and accordingly the series, of which this is the second volume, was begun.

We think this instalment a decided advance on its predecessor, and doubtless the series will follow the *crescendo* movement of merit. The very variety of subjects embraced in the volume is of itself a title to consideration. First in order comes the paper on "Conia and its use in subcutaneous injection," by Dr. Wilkie Burman, of Edinburgh, in which the author shows that when neutralised with acetic or hydrochloric acid, and dissolved in spirit and water, its injection in doses of from half a minim to three minims subdues the motor excitement of mania, and wards off emaciation and exhaustion. Mr. Herbert Major, assistant medical officer in the West Riding Asylum, gives us an interesting paper "On the Minute Structure of the Cortical Substance of the Brain in a case of Chronic Brain-wasting"; and Mr. Henry Sutherland, Lecturer on Insanity to the Westminster Hospital, follows with a practical inquiry into the relation between the menstrual function and the phenomena of lunacy. The paper "On the Effects of Ether and Nitrous Oxide combined" embodies the experiments of Dr. Samuel Mitchell. The disquisition by the editor "On Cranial Injuries and Mental Diseases" supports by a large catena of cases the thesis that lesion of the skull holds an etiological relation to every species of mental defect and disease, and that the full history of their effects upon mental health would be coextensive with that of insanity. "Puerperal Mania" is the subject of an essay which restates very clearly the point which science has reached in the diagnosis and prognosis of that subtle malady. No deaths, in the author's experience of the West Riding Asylum, occurred from the disease uncomplicated by other serious visceral lesions. Mr. Herbert's "New Method of determining the Depth of the Grey Matter of the Cerebral Convolutions" we shall notice hereafter; while the article "On the Mental Symptoms of Ordinary Disease," by Dr. Patrick Nicol, is one of the ablest in the volume, and deserves perusal by every physician, alienist or not. Dr. Clifford Allbutt adds to his contributions to electric therapy a good paper "On the Treatment of Insanity by the Continuous Current"; and Mr. Aldridge makes a valuable application of a novel agent in his observations "On the Ophthalmoscope in General Paralysis." The use of opium in melancholia is a fresh retracing of well-trodden ground by Mr. Mazière-Courtenay.

An instructive paper in many respects is that on Aphasia, by Dr. W. A. F. Brown. An exhaustive survey of previous inquiry into the subject clears the ground for grappling with its central problem, the conclusion being that a very large number of different deviations from the normal use of language, besides its abolition, must be considered before a trustworthy generalisation can be arrived at. The essay is well entitled to perusal, not only for its logical acuteness, but for its force and freshness of style. "The Sphygmograph in Epilepsy" is a careful little study by Mr. George Thompson, and concludes the Reports. Besides its purely professional merits, the volume deserves notice for its literary style, which, as a rule, is correct, while thoroughly non-conventional and often fresh and forcible in its tenor.

REPORT
OF
The Lancet Sanitary Commission
ON
EMIGRANT SHIPS.

No. II.

Ventilation and sanitary arrangements.—No patent or special plan of ventilation appears to be adopted in any of the Liverpool emigrant ships with which we are concerned. The outlets for foul and the inlets for fresh air comprise—ports or scuttles along the sides of the vessels (none of these ships have stern-ports); hatchways, varying in area very considerably; ventilators of two kinds, called respectively up-cast and down-cast; and windsails. The ports and scuttles are, comparatively speaking, of little use as ventilators, for they must be always closed when the wind is fresh; and it is also to be noted that, except in the newest ships, the orlop or lowest deck is, as a matter of necessity, unprovided with them. The hatchways are of course a chief means for the ingress and egress of air to and from the 'tween decks. One at least of these must exist over each division of the steerage, and their area, as a matter of working convenience, is in all cases as large as the size and build of the ship will allow. The 26th section of the Passengers Act of 1855 recites that over every hatchway "there shall be erected such a booby-hatch or other substantial covering as shall, in the opinion of such emigration officer, afford the greatest amount of light and air and of protection from wet as the case will admit." The practical result is, that in most emigrant ships substantial coverings are provided: sometimes in the form of what are called storm-hatches—i. e., large wooden hoods over the hatchways, with hinged lids; and sometimes a simple grating, covered if necessary with a tarpaulin. It is a rule, and we believe one very fairly observed, that these hatchways are never closed at all except from stress of weather; but as, particularly in Atlantic voyages, this circumstance must occasionally occur, other means of ventilation are necessary; and so a varying number of fixed up-cast and down-cast ventilators are provided; and here, again, a vast variety of arrangements exists in the different ships examined. No particular principle appears to be followed in the number or position of these ventilators. The down-casts are, at their upper ends on deck, furnished with a movable cowl, which is, or should be, trimmed strictly, and altered as the wind changes. The lower end is in some ships carried to within a few inches of the deck, in others about waist-high, and in others higher. The upper coverings of the up-casts are usually fixed; and the position of their lower ends as to the level of the deck, or the points at which they are situated, is very various, even in the case of ships the build of which is almost exactly alike. The total number of these ventilators does

not appear, as a rule, to have any fixed relation to the size of the ship or the area of the steerage deck, but varies from ten to twenty, with a total area of from a hundred to a hundred and fifty square feet. Ventilation by windsails consists, as most of our readers may know, of suspending canvas ventilators, with the upper openings head to wind, over any hatchway or other convenient communication that exists with the steerage or orlop decks. These, if properly attended to, are most useful, but want constant watching and careful trimming.

The supplementary means of ventilation comprise lateral spaces left over and below the bulkheads and the berths, which vary in vertical measurement from six to ten inches, and are in most cases carried along the entire width of the deck.

We may now recapitulate our experiences as to temperature during a passage of about eighteen hours from Liverpool to Queenstown. On making a round in company with the medical officer of the ship at 10.30 P.M., with a strong head wind blowing, and the ship at full speed, our thermometer stood at 70° Fahr. in the main steerage, at 73° Fahr. in the main orlop (or lower) deck, and at 66° Fahr. in the fore orlop deck, no material difference in temperature being observable in any particular parts of the deck. At this time all the ventilators were in working order, with one exception, and that on the main orlop deck, to which we directed the attention of the officers. All was perfectly still, although there were no less than 463 steerage passengers on board; any indications of sea-sickness were so slight as to be scarcely audible or visible. We visited the decks seriatim immediately after twelve at midnight: the same temperature as noted previously existed on all, the same ventilator was palpably out of gear, and the same quietude existed. At 8.20 A.M. the next morning, when the wind was somewhat more on the beam, and having observed that the cowl heads of the ventilators had been trimmed accordingly, we went below to the steerage for the third time, when the occupants were in the midst of breakfast, and no upward movement had commenced on the part of anyone. The temperature of the deck in which the married couples and children were located was 61° Fahr., and on the lower deck it was 67° Fahr. All were then up and busy at their morning meal, and, although we shall speak of food in our next article, we may say parenthetically, that nothing appeared to have affected the appetite unfavourably. The same ventilator still refused to do duty, and it is well to record in this place that the builder of the vessel, who on this occasion chanced to be on board (overlooking a process for lighting the ship with gas), pleaded guilty to having diverted the current of air of this particular ventilator from the lower steerage deck into the gas-room, which latter is an off-shoot of the engine-room.

The sanitary arrangements, apart from those described in our first report, may be very briefly told. It is not considered diplomatic in these ships, whether the weather be fine or stormy, to insist upon any general elimination of passengers from the steerage deck before breakfast is fairly over; so that, as a rule, the space below is not clear much before ten o'clock in the morning. It is then the duty of the under-stewards and helpers to sweep the 'tween decks thoroughly, to see that the berths are clean, and afterwards to scatter about some sort of deodorising powder, carbolic acid being most generally used. The ports or scuttles are opened if wind and weather permit, and the men, women, and children are as far as possible kept on the upper deck till dinner time, which occurs between twelve and one o'clock midday. The medical officer of the ship and the purser make a general round of the ship after the morning clearance is over, and from past as well as recent experiences we believe that this morning tour of inspection is diurnally and systematically performed.

In summarising the above record and remarking critically thereupon, it is plainly manifest that the designers and builders of ships are still very much at sea as to any simple and efficient scheme of ventilation. No uniform plan exists, it being as we believe a main point in the mind of the designer not to spoil the appearance of the spar deck by the exhibition of too many ventilator-heads or cowls. Hatchways in steamships are usually down-casts. Windsails, when used, must of course act in the same manner, but we have over and over again found them, even in the tropics, twisted and throttled below, probably by some interested person berthed near them. In spite of much that has been written on the subject, including the ingenious inductions and statistical particulars compiled by Dr. William H. Pearse, of Devonport (who, by the way, refers exclusively to sailing ships), we are very much disposed to believe and maintain that in a steamship moving through the water at an average speed of from eight to ten knots an hour, foul air has a tendency to collect in the after part of the steerage, where, if stern-ports existed, it would find a ready exit. The whole subject of the ventilation of ships is at present involved in obscurity, because the matter has not been sufficiently or systematically studied, and because the plans hitherto proposed are far too complicated for general adoption. But, as it appears to us, there are several conditions that should, and do not, universally obtain on all these Liverpool steamships—(1) that plenty of fixed up-cast ventilation should be provided at the forward end of the fore steerage, and at the after end of the aft steerage; (2) that more down-cast ventilation should, as a rule, be provided at the fore end of the fore steerage, particularly on the lower deck; (3) that the lower ends of all ventilators, whether up-casts or down-casts, should in all cases be brought to within a foot or eighteen inches of the floor of the deck, to prevent excessive draughts, or mischievous meddling; (4) that no ventilator of any kind provided for use on an emigrant deck should be diverted from its original purpose before another of equal calibre is provided.

Until the general *résumé* of these articles appears we prefer to postpone special criticism on the temperatures above recorded, and at present leave it to our readers to consider whether, according to their own knowledge and belief, the condition of things between decks on this occasion may or may not be correctly described as more "stuffy" than the bedrooms of many of our upper and middle classes, the occupants of which enjoy a large amount of cubic space and a liberal supply of light.

INTRODUCTORY ADDRESSES DELIVERED AT THE PROVINCIAL MEDICAL SCHOOLS.

QUEEN'S COLLEGE, BIRMINGHAM.

THE introductory address was delivered by Mr. C. J. BRACEY, M.B., Professor of Anatomy. There were, he said, three classes for whom this session marked a new era—those who to-day commenced the study of medicine; those who, having passed the examinations in anatomy and the other preliminary sciences, were about to devote themselves to the practical study of medicine, surgery, and midwifery; and those who had completed their studentship, and come to receive prizes and other distinctions, and to take leave of their teachers and fellow-students before commencing practice. To each of these he would offer some advice. After a reference to the pleasant freedom of a student's life, he showed how the profession of medicine was calculated to develop the mental and bodily powers of those engaged in it. As a science it included many sciences, and touched upon nearly all, so that a well-educated medical man had a general acquaintance with the whole range of physical sciences, and was in a good position to cultivate any of them. But the study of disease alone, he maintained, would afford sufficient field for the most active mind, there being no less than 1146 separate diseases registered in the official nomenclature, most of them presenting many varieties, and each requiring careful study. As an art, the practice of medicine, whilst it quickened the faculties of observation, stimulated the reasoning powers, strengthened the judgment, and steadied the hand, at the same time called forth the better part of a man, elevating his aims, and extending and deepening his sympathies. After giving some advice as to the judicious disposal of time, and the choice of the best kinds of recreation, the Professor urged the first-year's men to be careful, in forming acquaintances, to choose those who were not only pleasant fellows, but steady workers; and spoke of the improved discipline of the College, the present authorities being determined to send away those students whose misconduct became a source of danger to others. At the same time, he pressed upon the students the need for self-respect on their part, and feeling of *esprit de corps*. He next

referred to the attending of lectures as an antiquated custom, which, being in force, must be made the best of, and showed the good points of the system—a subject being thus brought out in a lively form, and illustrated by experiments, specimens, &c. By attendance upon lectures, too, the valuable habit of attention or mental concentration might be formed. The Professor pointed out the advantages which Birmingham possesses as a medical school in its large and well-appointed hospitals, with the various special institutions in which disease in all its varieties, both mental and bodily, might be studied; and referred with pride to the position taken by Birmingham physicians and surgeons in medical literature, mentioning the names of many eminent men of past times, and speaking in more general terms of the achievements of those now living. He especially commented upon the frequency with which the Jacksonian prize—"the blue ribbon of surgery"—had fallen to the lot of Birmingham men. Turning to those who had passed through the first part of their curriculum, he urged them to keep up their knowledge of the preliminary sciences, especially anatomy; for ignorance of this science led to bad surgery, and whilst the physician's blunders might be obligingly hidden away by the sexton, and decently covered by the churchyard turf, those of the surgeon had an awkward trick of hobbling about, to his great discomfort and eternal confusion. He entered into some details with regard to clinical teaching, and dilated upon the greater importance of getting training than of obtaining knowledge, and advised the students not to neglect the education of their simple senses whilst learning the use of the stethoscope, ophthalmoscope, and many other aids to diagnosis which modern science has applied. Whilst working in the hospital wards for the purpose of gaining knowledge, they would also be helping in the noble work of charity; and he entreated them to let their conduct to the patients be in harmony with this spirit, not treating them merely as cases to be studied, but as suffering fellow-creatures. By so doing they would find that

> "Mercy is twice blessed:
> It blesseth him that gives and him that takes."

For the habit of kindly sympathy would grow upon them, and whilst it made them better men it would also contribute to their success in practice.

QUEEN'S HOSPITAL, BIRMINGHAM.

THE inaugural address to the students connected with the Queen's Hospital Medical and Chirurgical Society was delivered by DR. JOHNSTON, who concluded with the following words:—"You will see at the very outset of your career that the art is divided into two branches—medicine and surgery—intimately related, artificially separated. As Clinical Professor, my earnest advice is that you should devote the first sessions of your hospital career to the teaching of the surgical staff. The surgeon always has a something local, tangible, palpable to the senses, on which he operates; his cases are complete. When illustrating the definition of disease, I purposely chose the simple abscess from a thorn and the needle-grinder's phthisis, because I thought that they would well illustrate the difference between surgery and medicine. The thorn, by its irritation, causes abscess, and this the secondary fever. The surgeon, with his knife, removes the thorn, and the fever is cured. The fine steel-dust, by irritation, causes ulceration in the lungs, and this again the secondary wasting fever of consumption. No forceps, knife, or scoop can remove that dust. The physician takes the case in hand; and, by modifying circumstances, by stimulating one organ to compensate for the shortcoming of the one diseased, by soothing remedies, and other means applied, he obviates the tendency towards death, and gives the poor sufferer a pleasanter and a prolonged existence. I believe the time will come when medicine will take much from the province of the surgeon. When the art is more perfected we shall no more hear of the operation for stone—having learned the means by which such formations may be prevented; or even stones themselves, melted into more soluble constituents, shall pass innocuously away. The same of cancer, the same of the exudations necessitating tracheotomy. I do not hesitate to say that one of the most valuable auxiliaries that you, as medical men, can have is the power of conveying to the mind of the sufferer a belief that he has on his side the sympathy, as well as the skill, of one able to combat with disease. Observe all things; don't strain after extraneous knowledge, but pick up information on all subjects in all places. As students, you must learn all that is appointed in the curriculum of the colleges. A knowledge of these subjects is indispensable; but do not rest satisfied with the simple knowledge. Knowledge, unless it is applied, is of very little value; and a man who studies simply for the sake of knowing is nothing more or less than a scientific Paul Pry. A man who joins the ranks of science merely to show the extent and variety of his reading, or the power of his memory, simply makes an exhibition of mental gymnastics of no more positive value than a similar exhibition of muscular power made by an acrobat. The points which I have hitherto brought under your notice have been very general in their character, and I must plead guilty to having dismissed them very summarily; but the limits of an inaugural address do not admit of much detail; and when writing these remarks, I felt myself very much in the position of a man who, having a great extent of country to travel over, has only a bandbox wherein to stow away his belongings. If he crams it too full, it bulges out of all shape and proportion, or may be it bursts and lets out some important article; if, on the contrary, he packs it carefully and lightly, he must leave out much that would be useful, and all that pertains simply to his personal adornment. Such being the case, I had better hand over some of the latter class of articles, by way of conclusion, more especially as many of you will soon be leaving your student career to enter the ranks of the real combatants in the battle of life. One of the most successful men of his day, being questioned by a young practitioner as to the best means of getting on in his profession, said, 'You must get into the hearts of the poor before you can get into the pockets of the rich.' To get into the hearts of the poor you must always use considerate and kind manners in your treatment of them, never pretending to more than you actually feel; for no character is so difficult to act successfully as that of affected sympathy. As regards getting into the rich man's pocket, don't be anxious about that; but I advise you to be careful, to be economical of that which you may get in return for your work. Finally, in the great battle of life before you, apply the time-honoured motto of my border clansmen, and be 'aye, ready, aye,' to relieve the sufferer, to alleviate the pains of the wounded or disease-stricken, be he rich or poor, regardless alike of his condition, his country, his faith. Be 'aye ready, aye,' to minister the gifts of a noble art, regardless of personal inconvenience, regardless of personal danger. So you will make good the words of the old heathen philosopher, 'Homines ad deos nullâ re proprius accedunt quam salutem hominibus dando.'"

LEEDS SCHOOL OF MEDICINE.

DR. HEATON, the President, commenced his introductory address by stating that they were assembled to inaugurate the commencement of the forty-second session of the Leeds Medical School, which for so many years had pursued its work of medical education, not without occasional fluctuations and temporary depression, but with the general result of steady progress and advance in its appliances for the work of teaching, in the number of its students, in its material prosperity, and, they trusted also, in the sound and comprehensive nature of the education imparted. Addressing his younger hearers, he reminded them that in every branch of natural science the faculty of observation was one which must be carefully cultivated and developed, and he did not know of any better exercise of the observing faculty than that which they had provided for them in the study of anatomy, which must be regarded as the foundation of all professional learning. Having spoken of the effect of certain modes of treatment in liver and other diseases, and expressed his conclusions thereon, Dr. Heaton introduced the discussion of a therapeutic question to show that the special studies included under the subject of materia medica and therapeutics not only possessed great practical importance, but were really most interesting when rightly considered, and that in no branch of their pro-

fessional studies there more opportunities for original experimental research, which, though not without its peculiar difficulties, might be made most valuable to elicit exact knowledge of the effects of the remedies they made use of upon the human body and its particular organs, instead of the vague, traditionary, and often, he believed, mistaken opinions which were held and professed as accepted doctrines at the present day. Turning to the consideration of zymotic diseases and the germ theory of their production, he asked, was this doctrine founded upon observed facts, or was it a mere hypothesis invented to connect observed facts in some intelligible and not impossible system? Recently, by the application of the high powers of the microscopic (1-50 in. object glass), Dr. Burdon-Sanderson had been able to detect in active vaccine lymph infinitely minute particles diffused through a fluid menstruum, and it had been found that in these particles resided the power to propagating the vaccine disease. Magnified to 8,000 diameters, these particles were seen to possess active automatic movements, and to be continually changing their form, presenting in these respects an animated resemblance to the colourless blood globules, or to those singular beings, the amœbæ, in which the first dawn of life and organisation appeared to glimmer. Here, then, in the case of this one zymotic they seemed to have demonstrated by the exact method the actual germs of disease, whose existence heretofore had been only hypothetical. By parity of reasoning it might be concluded that analogous germs exist of other zymotic diseases; and it was very conceivable how such particles, so minute, when thrown off from the body of a patient, might float in the air and penetrate the absorbent surfaces and enter the blood of fresh victims. It was a not uninteresting inquiry —were these disease germs capable of spontaneous generation, or could they only arise by the reproductive process from pre-existing germs of a like specific nature? The prevalent opinion was that such diseases as enteric fever or typhus might originate from the miasma arising from decaying organic matter, or from the crowding of humanity in close ill-ventilated spaces, but that small-pox, scarlet fever, or vaccinia could only be communicated from the bodies of those previously affected by the like complaints. In the fermentation of a saccharine solution the process ceases spontaneously when all the sugar is removed by conversion, and in the residual liquid fermentation can only be re-established by adding more sugar. And here he saw an analogy with those zymotic diseases which protect the patient from their recurrence. Some necessary pabulum has been removed from the blood, but in the course of years this may re-accumulate; thus the individual may again assume liability to the disease, and hence the necessity for re-inoculation with the matter of vaccinia to secure continued protection from small-pox, its *alter ego*. On the subject of cholera he might state that he had seen aggravated cases of cholera recover under his own treatment, not by eliminative purgatives, but by the administration of opium combined with small doses of calomel, to restrain the excessive intestinal action, and of stimulants temporarily to maintain life; and, therefore, although he should not object to the occasional use of an aperient to facilitate the removal of the excessive intestinal secretions, did he suppose these to be retained in the bowels instead of being copiously and violently expelled, as was more usually the case. He was not prepared by anticipation to attempt the cure of cholera by purgatives to promote the intestinal action already in excess. After speaking of the higher qualifications required in those presenting themselves to the licensing bodies, and in deprecation of mere cramming by the modes of teaching in the schools, he observed that for the third, and in all probability for the last time, he now occupied that presidential chair. It would have been in conformity with ample precedent had he, now holding the more permanent and somewhat responsible office of treasurer to the Council, declined to assume also the additional duties of president for the year, when in rotation the honour devolved upon him. But for this last time he had not felt disposed to excuse himself from that duty. It was to him a serious reflection that he was now a generation older than any of his colleagues in that school. Those in the Council next in seniority to himself had been pupils in that school since he began to teach there, and had listened to his lectures as pupils in years gone by. He was proud of them as such; and he hoped they did not altogether disregard their former teacher, with whom they now were colleagues.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

MR. BANKS, after a few remarks on the advantages which he thought were to be obtained by keeping up the time-honoured custom of the introductory lecture, proceeded to notice the various changes which had occurred during the past twelvemonth in the staff of the schools, and welcomed the new lecturers to their work. However much his own inclinations would have induced him to select some of the great medico-political questions of the day as a fitting theme for an opening address, he felt that, with regard to the school, the great crisis in its history had arrived, and it behoved them to look back on what they had done as a teaching establishment in the past, and see what they meant to do for the future. This naturally led to a review of the history of the school from the time when it was started by a coalition of private lecturers in 1834, and the speaker traced the various fluctuations in its rise and progress till the increased number of students, amounting to seventy-seven, had last year necessitated the formation of new buildings to carry on the work on a level with the increased requirements of modern teaching. A new museum, a suite of chemical laboratories, a new lecture-room, a physiological laboratory, and an addition to the existing dissecting-room had been deemed absolutely necessary, and for the requisite funds the lecturers had been obliged to appeal to the public. The subscription-list, headed by a donation of £1000 from Mr. Pemberton Heywood, had now reached the sum of £4000, and another thousand was still necessary to complete the new buildings. In support of the appeal which was now being made, he descanted upon the very intimate relations which existed between trade and science, and pointed out how there was hardly a great manufacturing enterprise in the town or neighbourhood whose success was not in the first instance due to the scientific worker. It was not the plodding chemist who discovered the materials for a new dye, nor the wandering botanist who showed the soil where the quinine or the cotton-plant would grow, that reaped the benefit of their discoveries, but the man with the business head and the long purse who stepped in and turned these discoveries to a practical account. He then, above all others, when making his thousands a year, ought not to forget the men who first put him on the road to fortune and position. In their visits to the merchants of the town the lecturers were often met by the assertion that they had nothing to do with science—they were traders, not scientific men; and Mr. Banks endeavoured to show how the prevalence of this idea had led to the fact that Liverpool, with all its activity and wealth, stood at the bottom of the list as regards the possession of teaching institutions or scientific establishments of any sort. Glasgow and Manchester, the two towns most readily comparable with it, were far ahead in this respect, the former boasting of a university, to which the public had subscribed about £170,000, not to speak of the Andersonian University, while the latter, thanks to the munificence of Owen, could point to a scientific school almost unrivalled in the kingdom. After urging the claims of the school upon the public on scientific grounds, he held that upon merely medical grounds the public were in some measure bound to support it. Could the medical man put a price upon the sympathy he exhibited for his suffering patient? upon the gentleness with which he bound up his aching wounds, or the patience with which he listened to his daily querulous complaints? Did the public take note of the demands which the sick poor made upon him, of the readiness with which, when often ill and fatigued himself, he would respond at any hour to the call of duty and present himself with a cheerful mien amid the frightened relatives around the sick one's bed? Did they consider the calls to accidents and horrible scenes of all sorts, for which the doctor knew as he put on his hat to go to them that he would never receive a penny, but for refusing to attend which his own brethren would be the first to upbraid him? He held that while for much of his services the me-

dical man could be recompensed in pounds, shillings, and pence, there was a very great deal for which his only reward lay in the triumph of his art, in the gratitude of his patients, or in the consciousness of duty well done. And for this the public were his debtors. If they could not recompense him in money let them help him in his education. Furthermore, while in the professions of divinity and law any reformations that had occurred had really been produced by pressure *ab extra*, by the voice of the public again and again reiterated, the case was different with the medical profession, for there the reforms in education had been the result of pressure put on the examining boards by the doctors themselves. In conclusion, the lecturer addressed a few words to those beginning their studies, on the necessity for a steady methodical application to work, and showed how the elevated position held by our great medical authorities of this, as of every other period, was by no means due to sudden inspirations of genius, but to the long and often unappreciated patient labour of years, which had at first laid the foundation of those pinnacles of eminence on which they now stood, and from which their most ordinary utterances were now received almost as words of law.

NEWCASTLE COLLEGE OF MEDICINE.

DR. ARNISON, after a few prefatory remarks, addressed those students who were just commencing their studies, impressing upon them the importance of practical work in the dissecting-room and laboratory, and the necessity of steady application from the beginning, in order to master the subjects of the first two years, and so be fitted for the important subjects to follow. Addressing the senior students, he urged the great importance of clinical study, that it was only in the hospital that they could train the senses to distinguish differences of symptoms apparently minute but having an important bearing on the diagnosis of the cases, and sketched the bewildered condition of a man who had neglected clinical study when confronted with a difficult case. The lecturer especially insisted on the importance of attending every post-mortem examination, for after entering into practice they would find very few opportunities. Dr. Arnison next addressed those about entering into practice, referring to the duty of kindness and sympathy to their patients as one too obvious to require further remark. He next urged the duty of keeping family and professional secrets, of which the medical man was often necessarily the recipient. There could be no more dishonourable breach of trust than to betray such confidence as this, and nothing would do more harm to their prospects than a reputation for idle gossip from house to house. He counselled them to be simple in their language, and avoid technicalities in their intercourse with the public, and especially in courts of law, stating that, as a rule, it was only inferior men who used ponderous technicalities in place of equally expressive "plain English." While insisting on the careful preservation of secrets from the outside world, Dr. Arnison said a certain amount of candour was due to the patient and his immediate friends, who had a right, in almost every instance, to know the nature of the case and its probable termination, especially if it was likely to terminate fatally. He counselled them to look for their reward rather to the satisfaction they would have in the skilful discharge of their professional duties than to wealth, which few in the profession acquired; and concluded by an earnest appeal to them to fit themselves, by honest and conscientious work, for the responsible duties of the life they had chosen.

SHEFFIELD SCHOOL OF MEDICINE.

THE introductory address was delivered by Mr. T. H. MORTON. After giving a history of some of the medical institutions of the country, Mr. Morton proceeded to state that on behalf of the lecturers he welcomed both the new and old students to the school. Although the pupils had been hitherto somewhat limited, he could assure them that the opportunities of witnessing rare and interesting cases, surgical and medical, at the hospitals, and the facilities they had of studying anatomy within those walls, were equal to those of any similar establishment in the country. He then addressed a few words of advice to the new students, giving a brief sketch of the nature of disease, alluding to the gigantic strides towards perfection as an exact science which the practice of medicine had made of late years, and mentioning the connexion which the study of anatomy, physiology, chemistry, botany, and other subjects had with the success of a medical man. He also dwelt upon the importance of respectful conduct towards patients; and urged those who were entering the profession to be influenced by higher motives than the acquiring of wealth. A medical man had great influence and power for good, not only on account of the possession of knowledge of which most people were wofully ignorant, but because his skill brought him into contact with an immense number of persons whose lives were almost placed in his hands. Their advice respecting the preservation of health, cleanliness, habits of sloth, excessive indulgence, intemperance, hurtful prejudices and conduct generally, struck at the very root of immorality and infidelity. A medical man was the custodian of the innermost secrets of his patients' hearts, and in the hour of death he was often the only earthly comforter. Hence the obligations of their profession were great, and it behoved them on the threshold of their career to consider seriously whether they would sacrifice their time, health, and strength for the benefit of man—rich or poor, irrespective of creed. This, he said in conclusion, could only be done by a love of their fellow-creatures and of their profession, and a veneration of the Great Author of all.

FRESH ENTRIES AT THE PROVINCIAL SCHOOLS OF MEDICINE.

Newcastle-on-Tyne (University of Durham College of Medicine), 57; Manchester School of Medicine and Surgery, 40; Liverpool Royal Infirmary, 28; Leeds School of Medicine, 18. We should be glad to receive returns of new students from other country institutions.

New Inventions.

THE "RHODA" BED-TABLE.

THIS is an ingenious contrivance for the use of invalids, consisting of a pedestal, the height of which admits of adjustment sufficiently weighted to support a table reaching over the bed of a sick person. It is fitted with reading-desk &c., which is reversible, so that it is equally available for either side of the bed, and, being made of mahogany, is a handsome piece of furniture, which may be conveniently employed for a standing reading or writing desk when not used for the bed. The manufacturers are Messrs. Frank Smith and Co., of Southampton-street, Strand, London; and the price is moderate.

CAPTAIN REED'S STRETCHER-BEDSTEAD.

WE have had an opportunity of inspecting this ingenious and simple contrivance, which, as its name implies, can be used for a stretcher or bedstead, and, when not so employed, is capable of being packed in a relatively small compass for transport. The stretcher can be converted into a bedstead, or *vice versâ*. This bedstead can be manufactured at a cost of from twenty-five to thirty shillings, having a weight (not including the air-bed) of thirty pounds. There is no doubt that it possesses several advantages over anything of the kind that we have seen for camp and field hospital use. It is not, however, adapted for the new pattern ambulance waggons for the use of the military service, owing to the fact that the stretchers employed in these vehicles are of a size and shape specially adapted to the springs and tramways fitted on to the floor of the carriage for receiving the stretchers and running them home, without involving any movement to the wounded men.

THE LANCET.

LONDON: SATURDAY, OCTOBER 19, 1872.

AMONG the duties of the medical journalist, there are few more painful than to receive, and to be often called upon to reject, applications for permission to make an appeal to the charity of the profession for some broken-down brother, or for some widow and orphans left destitute by the decease of their natural protector. The circumstances of such appeals necessarily vary greatly, and are sometimes so exceptional in their character that they can hardly be brought under any general rule, or considered except in relation to their individual merits. But in by far the greater number of instances the distress is such as might have been—nay, often must have been—foreseen; and its pinch, when it comes, is in no small measure due to the absence of any resolute endeavour to provide against it. It seems hard to say so, but in most of such cases the judgment fights against the emotions—and pity, if it ultimately unties the purse-strings, does not do so without a struggle, in which it often ought to be overcome. Men cannot be told too frequently, or taught too sternly, that it is their duty to society to exercise foresight for their own future and for all belonging to them, and that a wise charity will almost limit itself to helping those whom the proverb tells us GOD helps—those, namely, who help themselves. Precisely in proportion to the efforts that a man has made to lay by for old age, to educate his children to be capable of self-maintenance, or to make a provision for his widow, should be the sympathy felt for him and his, if those efforts have been abortive, or have been buried in a premature grave. For the easy-going persons who spend their earnings and leave the future to take care of itself, we have only to say that the time and money and thought necessary in order to assist them are usually little better than thrown away. In the case of the widows and orphans of such people there is often at least a *primâ facie* claim to compassion, but even this is only too apt to dissolve and melt away before actual scrutiny of the facts. We are not entirely prepared to endorse Mr. HUTCHINSON's doctrine about the physical continuity which links a man to his offspring; and we suppose that Mr. HUTCHINSON himself would hardly regard "they twain shall be one flesh" as other than an oriental metaphor. But still, in the families we have been considering, there is often a depressing monotony of shiftlessness, and the money that may be collected for them somehow dribbles away, and only postpones for a brief period their inevitable gravitation into some of the lower strata of the social system. Such, in truth, is the application of the doctrine of selection and of the survival of the fittest to intellectual and moral weaknesses, and the results are matters against which we are powerless to strive. In giving alms to many of those who ask, the least evil that we do is to waste means that might be more usefully bestowed.

In thus discouraging, and, as it seems to us, discouraging on sound principles, a too great readiness to lend an ear to everyone who has a sad tale to tell, we are anxious also to point out what the profession ought to do in the way of combined charity and self-help. We will assume that every right-minded man, as a matter of conscience and duty, when he considers the fruits of his labours, and the degree in which they have been blessed to him, considers also how much he will be able to spare, in the course of the ensuing year, for the assistance of those who may have been less fortunate than himself. Upon this sum, whatever it may be, each man must have his special claimants; and from it he will be called upon to exercise the hidden charity in which the right hand knoweth not what the left hand doeth. But it is not too much to suppose that, in our profession, every prosperous member may set aside somewhat for the relief of his brethren; and our particular object now is to urge that such a sum should not be scattered among applicants in proportion to their clamourousness, but that it should be entrusted to the stewardship of one of the three charitable institutions which have been founded to provide for cases of professional distress. We refer to the Widows and Orphans' Fund, which has the single disadvantage of appealing only to practitioners resident in the metropolitan postal district or in the county of Middlesex; the Medical Benevolent Fund; and the Medical Benevolent College at Epsom. The objects of all these are so excellent, and the claims of all are so great, that it would be invidious to do more than recommend that whatever can be spared for them should be divided among all. But we may point out that the Widows and Orphans' Fund, which has its office at 53, Berners-street, in the house of the Royal Medical and Chirurgical Society, differs from the rest in being to some extent an insurance office. Its benefits are conferred only upon the widows and orphans of the members (who each pay a subscription of two guineas annually), and are limited, of course, to such of these as may be in necessitous circumstances. Now, there is no medical man within the sphere of its operations who could not afford to pay two guineas a year to this Society; and, if all did so, there would be no more "appeals" for widows and orphans in the metropolitan district. We would urge everyone who is eligible to consider that, for the small sum named, he may place his widow and orphans, should he leave such, beyond danger of actual want; and then to ask himself whether the application of the money to this purpose does not step beyond the limits of prudence and expediency, and enter upon those of actual and bounden duty. The other Societies are pure charities, and are very inadequately supported. We can only add that we often regret the sums which are diverted from them, even by the claimants whose petitions we ourselves assist in placing before the profession.

AN article lately appeared in a daily contemporary as to the actual state of physical standards in Prussia as compared with their condition half a century ago, shortly after the conclusion of the war of emancipation, which left Germany impoverished and enfeebled, though victorious. The statements are based upon the results of an inquiry insti-

tuted by the writer. Concurring as we do with the general tenor and drift of the views put forward, there are still several points calling for criticism or consideration. It may be remembered that just before the commencement of the war which has proved so disastrous to the French we adverted to the superior physique of the German soldiers. A medical officer of rank and experience belonging to our own army happened to be returning from Switzerland at the time war was declared. Ample opportunities were afforded him for observing the troops of both nations, and he was very forcibly struck with the superior size and weight of the German soldiers. Whether the late generations of Prussians have been growing stronger and bigger, so that the average Prussian adult of 1872 is three inches bigger round the chest and two inches taller than was his grandfather or great-grandfather in 1822, we have no means of knowing; and we strongly suspect that the necessary data do not exist for forming a judgment. Be this as it may, the writer of the article proceeds to account for the appearance of a stalwart race of men in Prussia, and to draw certain inferences as to the value of size in the soldier. He states that the army and the male population of Prussia are convertible terms; that youths are taken out of the way of temptation at that period of their lives when their passions are at a maximum and their judgment at a minimum; that they are sequestered from the world for nearly three years, during which they are wholesomely fed and hard-trained; and that at the end of this time they return to civil life, while still young, marry, and beget sturdy children. This is the *rôle* that has developed the fighting capacity of the Prussian nation. There are, moreover, some subordinate and accessory influences at work, such as the prevalence of poverty and the necessity for thriftiness. That there is a certain measure of truth in all this we have no doubt, but the explanation is not so facile as it is made to appear. That military exercises at a certain age tend in a remarkable degree to develop the body and fortify the constitution we think unquestionable; and it is equally true, what GOLDSMITH expressed, that where wealth accumulates men decay. The reasons assigned by the writer are, however, inapplicable in the case of the Wurtembergers—a remarkably fine race of men; for military service with them is compulsory, but not universal. And, on the other hand, the Bavarians, who are a small race, proved eminently good soldiers during the late war, and bore, if anything, more than their share of the hard fighting and marching. During the first NAPOLEON'S Russian campaign it was the big German contingent that first broke down. Considering the nature of modern warfare, we much question whether the soldier really obtains much superiority om the possession of weight and stature. For ordinary purposes, for the wear and tear of field service, the type of men composing such corps as our own Rifle Brigade—men sound of health and supple of limb, wiry, and active—are superior to giant Guardsmen in endurance and staying power. Of course where great physical strength is required weight will always tell. The big artilleryman will be required at a gun; and the heavy cavalry soldier will overbear the light horseman at a charge, as was found to be constantly the case in the Austro-Prussian war. There can be little doubt that stature is regulated by certain laws which are tolerably well known, and that, like various other things, it is apt to "run o' the breed." Recruits from the north of Ireland are big men, and develop into fine soldiers; so do those from Northumberland and the Lake Districts. Take them altogether, perhaps one of the finest bodies of troops in the world is our own Royal Marine Artillery. We must never forget, however, that nothing succeeds like success. The Germans have proved victorious, and we set about accounting for it by pointing to the fact that they are physically finer and bigger men than the French. Had it been otherwise, we make little doubt that we should have had writers contending for the value and activity of soldiers of lighter build and shorter stature. Looking back on the late war, we feel convinced that the most marvellous military catastrophe of modern history is not to be accounted for on ethnological grounds, or those of the physical or physiological differences of the two races. The deterioration of the French was to be ascribed quite as much to moral causes as to any of a purely physical character. If we were asked why the Germans were victorious, we should reply in the language of an Irishwoman to ourselves—"Every why, your honour!" Where perfect preparedness existed on one side, and entire unpreparedness on the other, it is easy to understand how that other side went down like a pack of cards. Let soldiers be ever so good, there is still a great physiological truth in the expression that an army marches on its belly. If men have to undergo extra exertion, they must have extra food. There probably never was an army superior in training and physique to the contingent we sent into the field during the Crimean war. It perished from cold and starvation during the memorable winter before Sebastopol. The disease and mortality that prevailed were not ascribable to defective sanitation as ordinarily understood, but to starvation. Scurvy, dysentery, frostbite, and typhus killed our soldiers. We suspect, too, that the wretched soup of the French soldier, and the superior if coarser food of the Germans, have not been altogether without their effect on the two races of men. We would not conclude, however, without expressing our conviction that Canon KINGSLEY struck the right note in his late vigorous address, although he may have given an exaggerated sound. We ought to take heed to ourselves in this matter if England is to hold her own in the future history of the world. The race is to the strong, if not to the big of stature. Without a high standard of physical health in the nation a supply of efficient and vigorous soldiers cannot be maintained. The race that springs from very early marriages is as weakly perhaps as that which springs from late ones. There is in this, as in most other things, a middle course, which is at the same time the safest. We cannot practically carry out the Darwinian theory to its logical end by allowing only those who are physically fittest for the struggle of existence to survive, but we can see that our sanitary legislation removes or diminishes the hindrances to health that now environ our labouring population; and for the rest, we must trust to the gradual increase of intelligence in all classes to perceive that, without temperance, chastity, and sobriety, moral and physical health is impossible.

WE do not intend in any way to prejudge MARY ANN COTTON, or to anticipate the nature of the evidence that may be given when she is tried on the charge of poisoning CHARLES EDWARD COTTON, and perhaps sixteen or eighteen other people. Already his body and that of JOSEPH NATTRASS have been disinterred, and the viscera have been subjected to chemical examination by Dr. SCATTERGOOD, of Leeds, with the result of obtaining arsenic in sufficient quantity to cause death. We may suppose that fifteen or eighteen persons have actually been poisoned. The question, who was the administrator of the poison, is one for a jury to decide, and which we have nothing to do with. But there is another question, which has indeed been already indirectly raised,—How are we to explain the fact that a long series of poisonings like this should have gone on undetected until now? There are various ways in which a case of poisoning may be detected. Not unseldom the first suspicions arise in the mind of the medical man, and his quiet investigations leave no doubt that the patient is being poisoned even by those nearest to him. This service of medical men has often been admitted in terms of praise by the Judges. When a man or a woman is being poisoned, it is the duty of the medical practitioner to perceive the fact, and to bear himself wisely as he tests his suspicions. It is a mere question of diagnosis. And it is just as right that a physician should detect arsenical poisoning as that he should detect pneumonia or phthisis. At the same time there is not quite the same discredit in overlooking the element of poisoning, where the poisoner acts with anything like skill, as in failing to detect pneumonia or phthisis. Some writers have suggested that the most startling fact in connexion with this series of cases of alleged poisoning is the utter failure of medical skill of the average character to detect in the illness and death of the victims any indication of foul play. We are not going to apologise for errors of diagnosis, or for the confounding of two cases so distinct as that of typhoid fever and arsenical poisoning. We confess at once that it is very difficult for us to conceive of a case of arsenical poisoning having the essential features of typhoid—to wit, its course, its characteristic pyrexia, its eruption, and the absence or infrequency of vomiting. It is still more difficult for us to conceive of a group of cases of arsenical poisoning all like enough to typhoid to be satisfactorily certified as such. We have yet, however, to hear the medical account of the cases. And there are two or three circumstances which go, not to excuse the non-detection of poisoning in these cases, supposing them to be cases of poisoning, but to explain how it happened. The very number of the cases, in other words the very audacity of the crime, was a distracting thing. It is little discredit to a man whose whole mind is occupied in healing disease and obviating the tendency to death that the thought of poisoning does not readily occur to him. Disease being so various in its manifestations, he is always prepared to meet with anomalous cases. To the credit of human nature, most medical men pass through their lives without seeing a case of chronic poisoning. And when it does occur it is apt to find them unsuspicious. Still less is a man prepared to meet a group or successive groups of poisoning cases. The doctors may be able to show that the cases bore some resemblance, if not to typhoid, to other cases of blood-poisoning, as from drains, such as do happen now and then. Again, supposing that these cases were all cases of poisoning, it is to be remembered that they did not all happen in one place, in one family, or under the observation of one medical practitioner. Still it is the duty of medical men to be right, whoever else is wrong. It is dreadful to have to entertain the suspicion that a patient is being killed, not by natural causes, but by a foul hand that should be a friendly one. Nevertheless in some circumstances not to entertain such a suspicion is to fail terribly in duty, to lower the reputation of the profession, and allow lives to be lost which it is our business to save. No satisfactory statement can be made of the circumstances that would justify a man in suspecting foul play. Only very strong facts indeed would warrant him in expressing his doubt. But short of expressing it he may do much to test it. Dr. TAYLOR somewhere advances the opinion that slow poisoning by arsenic is more common in this country than is generally supposed. Be this opinion true or not, it occurs often enough to make suspicion of it occasionally excusable, and seldom enough to make the detection and demonstration of it very creditable to medical science. Until diagnosis is much nearer perfection than it is, poisoning will be occasionally overlooked, but the more credit will be given to the intelligence which perceives and exposes it. The struggle sometimes is between a man's charity and his suspicion. There is nothing in charity, however, to forbid the exposure of poisoning. Not only as members of society, but as the advisers of the sick, it becomes us to remember the possibility of poisoning, and to satisfy our own minds on the subject. The appointment of public analysts in all large towns will favour a much more careful examination of ejecta and by so much a sounder diagnosis.

THE judgment of the intelligent foreigner may not be, as CAMILLE DESMOULINS says, "that of a contemporaneous posterity"; but we are always the better for it, particularly when the foreigner himself belongs to a cognate civilisation with ourselves. The great sanitary and social movements in Germany are full of interest for the enlightened physician, not only from the ability and originality of their promoters, but from the practical criticisms they embody on parallel efforts in these islands. Sanitary legislation, for example, is proceeding in Germany with a vigour which puts to shame the vacillating and purblind policy of our Government. And why? Because the Imperial Chancellor, in framing his scheme, draws his inspiration primarily from medical sources, counting as of quite secondary importance those municipal and non-medical interests which appear to be over uppermost in Mr. STANSFELD's mind. We have long sat at the footstool of German science, perhaps with two servile an obeisance. We have often preferred its plausible generalisations to our own more cautious inductions, and have accepted, on trust, conclusions of a practical bearing which only the most exacting verification should make admissible. But if anything would justify our continuance in such a course it would be the contrasted conduct of Germany and ourselves in the matter of medical

education and public hygiene. Where her faculty is unanimous and co-operative, ours is at variance and self-frustrating. Where our Legislature veers about in obedience to the *popularis aura* of town councils and vestries, her's interprets the mind of the most intelligent and authoritative, and makes its enactments accordingly.

"Man sagt oft," says GOETHE, "Zahlen regieren die Welt. Das aber ist gewiss, Zahlen zeigen wie sie regiert wird." "It is often said that figures rule the world. This, however, is certain: figures show how it is ruled." In compliance with this axiom, the physicians of Germany have been labouring for the last twenty years to form a system of medical statistics, as the only means of putting sanitary reform on a truly scientific and comprehensive basis. Their non-success has resulted from causes which the Imperial Chancellor is allowing them every facility to remove. Having designed a central board of health, with ordinary and extraordinary members, the Chancellor proposes to bring it into immediate relation with all the practitioners throughout the empire, so as to procure from them reports, returns, and other statistical apparatus on which practical legislation can be based. Special enactments for local hygiene having thus been framed, the officers entrusted with their observance or enforcement will, it is understood, be drawn from the ranks of that profession which has virtually created them and is best qualified to see them carried out. In other words, lay inspectors under the projected State hygiene of Germany will not, as under Mr. STANSFELD'S measure, usurp the functions of medically qualified officers.

Sanitary legislation in this spirit puts England far behind her Teutonic sister, who will possibly be sending her children to our shores as OXENSTIERN sent his son, to see "quantulâ sapientiâ mundus regatur." Nor is it in public health alone that we are being distanced in the race. In social legislation—in the enactments for the protection of factory children for example—we are far behind the philanthropic conceptions of the German publicists. Take, for instance, the Congress held the other day at Eisenach, and compare the discussions on the regulation of juvenile labour with those that preceded our Factory Acts. Where Mr. BRUCE would close the age of exemption from work, BRENTANO would have the boy still at school, fitting himself for more effective labour at maturer years, the majority of which have been spent in developing the physical powers as well as the mental by the turnverein and the gymnasium. And as in industrial so in every kind of employment: the wiser German would postpone the age of exertion to a time when the system is prepared to put it forth effectively, and not anticipate the years of manhood by labour which unfits the workman for its duties.

AT Wisbeach, Miss M. E. Trafford Southwell, of Honington Hall, Grantham, laid on Wednesday the memorial stone of the North Cambridgeshire Cottage Hospital. The hospital is to contain sick wards, convalescent rooms, occasional and special wards, operating and consulting rooms, and dispensary—all on a handsome scale—the total value of the gift being £7000. The Messrs. Peckover, bankers at Wisbeach, add to the endowment fund £2500. The ceremony passed off with much success.

Medical Annotations.

"Ne quid nimis."

EXCESSIVE BRAIN-WORK.

THE melancholy suicide of the late Justice Willes has given occasion for much writing on the above subject, and the writers one and all seem to take it for granted that excessive mental labour was the indirect cause of the sad occurrence. The "mental" aspect of the case is doubtless well worthy of our most careful attention, but we are by no means satisfied that the Judge's mental aberration was the result simply of over-work. The following facts are, we think, important. Justice Willes was fifty-eight years old; he was liable to gout; he had been troubled with symptoms referable to his heart; and he was accustomed to spend a great part of his time in the stifling atmosphere of a law-court. Knowing this much, what ought we to infer was the condition of his cerebral bloodvessels? And if we allow them to have been diseased—as in the face of these facts we undoubtedly must,—ought we to be surprised that he evinced symptoms of defective brain-nutrition? The strange, altered manner, the forgetfulness and the depression of spirits observed in the deceased shortly before his death, are among the symptoms which are considered characteristic of commencing softening of the brain, and when to these symptoms we add the gouty history, there is but little room to doubt that there was a definite physical cause for the mental condition. When we dogmatise about the effects of over-work pure and simple upon the nutrition of the brain, we are, we must confess it, indulging in speculation; but when we say that a gouty man who has given evidence of heart disease has probably got diseased bloodvessels as well (which disease of the bloodvessels frequently leads to softening of the brain), we are dealing with every-day facts, and speaking well within our knowledge. Perhaps some Broca of the future may point out for us the exact seat of the lesion in these cases, and we may be able to localise the brain-mischief which leads to suicide. We are ready to admit that excessive work of an ill-nourished brain would be likely to increase that state of mal-nutrition, but we cannot shut our eyes to the fact that but for the common sequence of gout, atheroma, and cerebral softening, the event which has called forth these remarks would probably never have happened.

Taking this view of the matter, let us ask ourselves if medical science could have averted the catastrophe? We have no hesitation in saying that had the Judge been willing to implicitly follow medical advice, his fate might have been at least warded off for a time, if not entirely prevented. Had he been willing not merely to forego all mental work, but to abjure everything which could in any way foster his constitutional tendencies, that state of cerebral mal-nutrition which was the indirect cause of his death might have been indefinitely postponed.

THE LONDON WATER MONOPOLY.

SIR SYDNEY WATERLOW has called attention to a fact which ought to precipitate the legislative settlement of the question whether or not it is proper that the water-supply of the metropolis should remain in the hands of the trading companies who have hitherto monopolised it. Everybody knows of the practical interest taken by Sir Sydney Waterlow in the provision of improved dwellings for the working classes, and how much he has personally done in furtherance of this great sanitary work. With what impatience then do we learn that the company of which he is the presiding genius, wishing to give the benefits of a constant

water service to a recently erected block of improved dwellings, is debarred from so doing because the East London Water Company, by virtue of a private Act of Parliament obtained twenty years ago, is not bound to supply (and apparently, therefore, refuses to supply) water at a higher elevation than forty feet above the pavement level. The plan which had been previously adopted by the Company, and found to work admirably in their buildings at Pimlico, Goswell-road, and elsewhere, was to erect on the roof of each block of dwellings a tank calculated to hold sufficient water for nearly two days' consumption, there being a waste-preventing tap to each supply-pipe, and the general supply being by meter at a fixed price per 1000 gallons. The result has been to show that this plan of constant service is less expensive than the old intermittent supply, with the advantage of greater purity than by the use of small cisterns. The Grand Junction and Chelsea Companies have supplied these block tanks at heights varying from fifty-five to sixty-three feet, and the New River Company are actually supplying one of them at fifty-nine feet within a few hundred yards of the new dwellings which the East London Company object to supply at fifty-five feet. We agree with Sir Sydney Waterlow that this is a monstrous state of things; and, after what he has said upon the subject, we shall expect to find him lending his vigorous support to the efforts which will no doubt be made, with success as we most cordially hope, in the ensuing session for the transfer of the powers and privileges of the London water companies to one sole metropolitan authority.

RODENT ULCER.

DIFFERENT views have been held by pathologists as to the nature of the disease commonly known as "rodent ulcer." By many it is regarded as allied to, if not identical with, some form of cancer; while by others it is considered as quite distinct in structure, as well as in history, from that disease. Sir James Paget and Mr. Hutchinson are in accord that a microscopical examination of the morbid structures, in cases of rodent ulcer, shows none of the elements of epithelial or scirrhous cancer. The affection is tolerably well known, and its diagnosis not difficult. Its situation, raised and hardened edges, and slow progress without involvment of the neighbouring glands, suffice to indicate its nature. Notwithstanding its slow progress, it ultimately leads to great destruction of the tissues involved; and there is a lurking suspicion that this ulcer is something more than the result of a mere chronic inflammatory process. As those who believe it to be cancer fail to find the anatomical structures peculiar to that disease, they have to fall back upon its clinical peculiarities to support their opinion.

A monograph on the Anatomy and Development of Rodent Ulcer, which formed the Roylston Medical Prize Essay for 1872, has recently been published in Boston by Dr. J. Collins Warren, in which an attempt has been made to elucidate the pathological anatomy of this affection. Dr. Warren gives the history of five cases, with illustrations of the microscopical appearances of sections of the diseased parts. He states that a number of other cases had come under his observation, but examination led to the same results in all of them—viz., that rodent ulcer is but a name given to a form of epithelial cancer, which differs from those forms of epithelial cancer of which cancer of the lower lip is the type in the small size of the epithelial cells. Passing over his remarks on the classification of cancers of the skin, and his references to the observations of Paget, Lebert, Thiersch, Billroth, and others, we find that he considers rodent ulcer to be the most typical form of the small cell variety, or flat or superficial cancer. This form is characterised by a slow growth, and is very rarely followed by an infection of distant parts. Summing up the results of his observations, as read by the light of modern pathological investigations, especially those of the German school, Dr. Warren says that we find in certain cases the formation of cancer-cells is preceded by an escape of white blood-corpuscles through the walls of the vessels, and an accumulation of similar cells in the adjoining lymphatic canals; that this is followed by an apparent transformation of these cells into cells resembling strongly the epithelium of the rete Malpighii; that the epithelium of the affected parts does not appear to take any active part in the process; and that the cancer-cells lie in the lymphatic spaces of the connective tissue, and do not invade to any appreciable extent the lymphatic vessels. The low formative power of the elements, the absence of power to multiply themselves to any extent when once formed, and their extremely short-lived character, seem to afford the most satisfactory explanation of the inability of the disease to affect distant parts, rendering rodent ulcer the type of the mildest form of cancer with which we have to deal.

INCREASE OF LUNACY IN IRELAND.

THE Scottish Commissioners in Lunacy, so far, at least, as their annual reports are concerned, take a more scientific view of their functions than either their English or their Irish counterparts. This remark we have often made, and it still remains as true as ever. For the masterly digest of the contents of the report which Sir James Coxe prefixes to that document, neither the English nor the Irish Commissioners have anything to show. They confine themselves to statistical tables and descriptions of asylum interiors, leaving the legislator and the sanitary reformer to interpret their scientific value as best they may. The increase of pauper lunacy in the three kingdoms is proved by the three reports; but only the Scottish one attempts to explain the phenomenon. "Dissipation in its various forms, overwork of body, insufficient food, the respiration of corrupted air, and the neglect of intellectual and moral culture," are the causes which Sir James Coxe indicates. Disastrously effective as these causes are in England and Scotland, they are still more so in Ireland. This is a matter confirmed by her daily press. The result may be anticipated. According to the Commissioners' twenty-first report, just issued, lunacy in general, and pauper lunacy in particular, are greatly on the increase in Ireland. In 1846 the insane amounted to 12,397. For the year ending 1871 that number had risen to 18,327, a result still more significant when the yearly reduction of the population is considered. The returns of insanity are fewest in Connaught, as might be expected, while in the more populous and industrial districts of Ulster, Leinster, and Munster they are abnormally heavy. The idiots in union workhouses are, in Connaught, 217; in Ulster, 465; in Leinster, 490; in Munster, 488. Of lunatics, properly so called, the workhouses contained, in Connaught, 78; in Ulster, 354; in Leinster, 456; and in Munster, 366. The three district lunatic asylums in Connaught contained 1017; the seven asylums of Ulster, 2518; the six of Leinster, 2816; and the six of Munster, 2556. Irish physicians ascribe this large percentage of lunacy to intemperance, with its innumerable disastrous sequelæ, while others ascribe a good many cases to political excitement. That this latter is a cogent cause of mental derangement is certainly believed by continental alienists, more especially those of Italy and France. The great Hospital of the San Spirito at Rome used to teem with lunatics from political enthusiasm. For these and other adverse agencies the grand remedy is education—education in that enlarged sense which makes the people the intelligent guardians of

their own health by instructing them in the knowledge of their physical and mental constitution, in the laws of health, and in the conditions of normal development. Such a programme, however, has smaller chance in Ireland than in the sister kingdoms, where political excitement absorbs less of the national thought.

BALANTIDIUM COLI—HUMAN PARASITE.

THE last part of the *Monthly Microscopical Journal* contains an abstract of a paper by Dr. Wising, of Stockholm, published in the *Northern Archives of Medicine*, "On the Anatomy and Physiology of the Balantidium Coli," a parasite first described by Prof. Malmsten in 1856. In 1869 a labourer, sixty-two years of age, noticed for the first time the presence of small white worms in the motions from the bowels. About Christmas of that year he suddenly became afflicted with severe colicky pains, followed by considerable diarrhœa. This at last became so bad that there were as many as twelve stools a day. They were usually of the consistence of thin pea-soup, sometimes with firmer lumps intermixed, sometimes quite watery, and most frequently rather small in quantity. There was but slight tenesmus, but after some time the stools were streaked with blood. The microscope showed, besides the remains of food, a good many lymphoid cells, a few red blood-corpuscles, and balantidium coli in very large numbers. The original paper contains lithographs of the anatomy of the animal, with its peristome, adoral cilia, nucleus, nucleolus, and contractile vacuoles, together with the phenomena of coition and the process of reproduction. The latter is thus carried on:—The body of the parasite elongates, so that its length becomes double its breadth, and the nucleus itself, also somewhat elongated, assumes a central position, with its long axis in the direction of that of the body. A tendency to constriction across the middle of both body and nucleus then occurs, which increases until the two halves are at last connected by a tiny filament only. The anterior half contains the old peristome, quite unaltered, while in the posterior half new adoral cilia begin to develop from the ordinary ciliary layer. At this stage the nucleus parts in two, so as to form a separate nucleus for each half of the body. Usually only one contractile vacuole is now found, lying near the back portion of each half, for the anterior vacuole does not generally appear until the separation has been completed; both halves of the animal gradually take on a more independent life; and finally the connecting filament gives way, and the two halves fall apart as distinct living beings. The anterior half which contains the original peristome is a fully developed animal from the time of the separation, but the posterior half is as yet very unlike the full grown parasite into which it in time develops.

THE EUPHRATES VALLEY RAILWAY.

MR. GEO. LATHAM, F.R.G.S., has communicated to *The Times* a most interesting letter confirmatory of the opinions as to the hygienic aspect of the projected Euphrates Valley Railway, expressed in THE LANCET of the 28th ult., and reproduced in the columns of *The Times*. Mr. Latham gives a vivid picture of the unwholesome state of Kerbela and Meshed Ali, and of the loathsome condition of the great mass of the pilgrims who visit the shrines of these cities. He writes of the two cities that they "are not only the hotbeds of cholera, but the birthplace of every foul disease and custom that can be named." In Kerbela, he states, that he saw "hundreds of bodies (brought from Persia) piled up against the mud walls of the huts outside the town, waiting burial, among the remains of dead camels, mangy dogs, and foul offal, coupled with all the disagreeable surroundings of thousands of pilgrims of the poorest classes from the districts of Persia, descending chiefly by the Souli Maniek Pass." He describes the filthy bazaars of the city as "crowded with the stinks of many forefathers." He states that the cleared cavity (thorax and abdomen) of the corpses are used commonly for smuggling valuable articles of commerce from Persia to Kerbela. Close to piled-up corpses he saw camels being slaughtered for food. Mr. Lathan "journeyed to the shrines during the period that caravans are generally formed for conveying the bodies of pious Sheah Mahommedans to be companions of the sons of the Prophet," and, he writes, "in the caravansaries he had to sleep, cook, eat, and smoke, and pass his time among the embalmed sacks of these human remains, while in the moonlight marches over the desert it was weird to see four, and sometimes five (two on each side and one across) bodies swinging to and fro, casting their long, moving shadows over the desert, comforted only by soothing Sebeel or mild Latakia."

SANITARY LEGISLATION.

THOSE who have read the address of the President of the Health section at the Plymouth Social Science Meeting, since it has been (as we presume) authoritatively published, will hardly fail to have been struck by Dr. Acland's strongly expressed hope that there should be no Public Health Bill next session. So anxious does he appear to have been on this point that he "implored" the Association not to put any pressure upon the Government, who should be allowed to wait "until they see what are the effects of the existing laws, and until the local authorities have had time to mature their plans." Surely he must have forgotten for the moment that the highest authorities both in and out of Parliament have again and again declared those "existing laws" to be a confused jumble, impossible of comprehension as they stand in the statute books; so that delay, on the grounds he suggested, would presumably not be limited to the next session, or even the session after. And with regard to the local authorities we have some difficulty in understanding how it can be easier for them to "mature their plans" under a chaotic mass of law, than with the help of a clear perception of their obligations which a consolidated statute would give them. That it is not very plain sailing at present may be gathered from the speech delivered not long since by Mr. Walter, M.P., who characterised the Act of last session as "a very imperfect and inadequate measure," inasmuch as, although it told people to whom to apply to get rid of a nuisance, it left the manner of its riddance an open question.

Dr. Acland's appeal for delay strikes us as more remarkable for its urgency than for any cogency in the arguments on which it is based. For our own part, we cannot endorse that appeal; and we trust that so far as the Government are concerned it will not lead them for a moment to suppose that delay is either desirable or likely to be tolerated in Parliament. Mr. Stansfeld has every reason to be grateful for the help he received from the Conservative chief and his followers last session, but it is undeniable that such support was given on the distinct understanding that the Bill of 1872 was but, to use Mr. Disraeli's own words, "a preparatory step to the large measure which the Government have announced that they will on the first opportunity introduce." In almost every debate which took place upon the Bill it was treated simply as an instalment, acceptable only because the "cargo thrown overboard" was pledged to recovery on the next voyage. There can be no mistake about this obligation on the skipper's part; for, on the 13th July, in answer to a question by Lord E. Cecil as to whether the dropped parts

of the Bill were to be taken up next session, Mr. Stansfeld replied that "he had distinctly stated so."

The argument that because the question of local taxation needs to be settled next year, sanitary legislation must be postponed, will not hold water. Is Mr. Stansfeld's big department after all such a "one-horse affair" as to be equal to only one legislative effort per annum? Surely the fact that local taxation and local sanitation (in some of its bearings) are closely related subjects, should tell strongly in favour of concurrent legislation. We cannot admit that it affords any ground for postponing either the consolidation of our sanitary laws or any other questions of sanitary reform. Mr. Stansfeld may be sure that, whether prompted by others or acting on his own ideas, if he contemplates leaving public health matters in their present unsatisfactory state for another year, he will find himself most miserably deceived when Parliament meets.

THE MANCHESTER ROYAL SCHOOL OF MEDICINE AND OWENS COLLEGE.

AFTER an independent and honourable existence of nearly half a century, the Manchester Royal School of Medicine has now become adjoined to the Owens College—an institution which will by and by become the university of the North of England, and of which it is most right and proper that the Manchester School of Medicine should be a department. The project has been for some time floating to the front, and the difficulties which existed, or were thought to exist, having successively disappeared, we are now able to congratulate the parties concerned on the successful accomplishment of all that was contemplated and hoped for. The independent constitution and government of the School, on the basis which has so long existed, were brought to a close at the end of the summer session, after which date everything became identified with the Owens College. The students having been accustomed, as in all other medical schools, to an annual address, with distribution of the prizes and certificates of honour awarded at the last preceding competition for honours, Monday, the 7th inst., was appointed for these formalities, Mr. Thomas Turner, F.R.C.S., the founder of the School, being invited to give the address. In the course of his remarks, Mr. Turner expressed his cordial approval of the union of the School with the Owens College, and his satisfaction at the eminent prospects of advantage which would result to each party. Until the new buildings for the College in Oxford-road shall be complete, the School arrangements as to lectures, the anatomical room, &c., will be carried on as heretofore in Faulkner-street. After the lapse of a session or two, no doubt there will be a removal, more or less complete, to the edifice now in progress. The staff of lecturers at the School, of course, remains intact.

FATALITY OF DISEASE IN 1870.

IN an Appendix to the Registrar-General's Thirty-third Annual Report (just issued), Dr. Farr discusses in his characteristic style the leading features of the death returns for 1870. Dealing first with the zymotic group of diseases, Dr. Farr combats the notions of "some popular writers" who, "with a kind of oriental fatalism," assert that Asiatic cholera is uncontrollable, whereas he believes it to be "more completely under medical control than any other known epidemic disease"—firstly, because its propagating fluid is tangible, and can be destroyed, and, secondly, because there is almost invariably premonitory diarrhœa, which is amenable to simple remedies. Dr. Farr has been so strenuous an advocate of the water theory of choleraic propagation, that even those who differ from his views in that respect will readily acknowledge that their dissemination has been to the advantage of the public in bringing about an improvement in the quality of the water-supply generally. Syphilis alone caused 1858 deaths in the year, the registered mortality from that malady having doubled itself in the last fourteen years: it was fatal to 762 boys and 660 girls in their first year of life; from the ages of fifteen to thirty-five there is a great excess of deaths among women; between thirty-five and forty-five the excess is slight, while over fifty-five, few women die of enthetic disease. Thirty-two deaths were recorded from hydrophobia, there having been 18 in the year previous, and 7 in 1868; the largest annual number ever registered was 36, in 1866. It is noticed that four-tenths of the deaths from "privation"—starvation, to put it plainly—occur in London, and that more males than females die from that cause. Whether Dr. Farr's suggestion, that "the machinery for the discovery of such deaths is more complete in London than elsewhere," is adequate as an explanation of this striking illustration of the meeting of the extremes, poverty and wealth, we must not stay now to consider. The deaths directly resulting from alcoholic poisoning were 645—namely, 337 from delirium tremens, and 308 from intemperance in its various forms; the proportion of the two sexes in this self-destruction was 496 men to 149 women. Two of the males died under twenty years of age, two of the females under twenty-five, what should be the prime of life (thirty-five to forty-five) being the period of greatest mortality from drink, while extreme age contributed its disgraceful share by the death of two old women over seventy-five years. The fatality of phthisis has declined of late years, coincidently with an increase in that of bronchitis and pneumonia; the difference is no doubt partly a question of diagnosis and nomenclature. Noting the fact that violent deaths were below the average of the previous five years, we defer for the present further remark upon Dr. Farr's interesting statistics.

OHIO LUNATIC ASYLUM.

SINCE the incomparable description of the burning lunatic asylum in Madame de Stael's "Corinne," we have had nothing so impressive of the kind as the accounts of the conflagration of the great institution for the insane in Northern Ohio. That building is, or rather was, a splendid structure 900 ft. in length, the exterior walls being entirely of stone. Two large wings had just been completed at the cost of 300,000 dollars, thus rendering it capable of holding 600 patients, who amounted to fully that number at the outbreak of the fire. When the flames got the mastery, orders were immediately given for the removal of the inmates, and the officers and attendants hastened to unlock the doors of the wards and cells. Some of the patients consented at once to come out, and even volunteered assistance to the others. Some, however, became furiously maniacal with fright, and shrieked and yelled frantically. Several of these had to be removed by main force, neither threats nor entreaties prevailing on them to go. They hid themselves in closets or under beds; while one man refused to leave his wardrobe, and had actually to be torn from it. The females were more unmanageable than the males; they ran about aimlessly in their terror, and many of them also refused to quit their cells; others again, after being rescued, rushed back into the burning building, only to be brought out by force. The villagers exerted themselves manfully in assisting the asylum officers, many of whom were nearly stifled with heat and smoke before the last of the patients were removed. An immense tank near the centre dome of the building, containing 6000 gallons of water, had its supports burnt away, and fell with a tre-

mendous crash through the intermediate floors to the basement, isolating an unfortunate lady in a room on the second floor, who was thus cut off from aid, and perished. The grounds of the building presented a scene of the wildest confusion as the patients, shrieking, moaning, laughing maniacally, or sullenly silent, were conveyed in waggons to the neighbouring churches, which were thrown open for their reception. The loss to the State is reckoned at 500,000 dollars, on which there was no insurance.

The medical history of the Ohio Lunatic Asylum cannot fail to be peculiarly interesting after this terrible experience. Mania from fire is a special form of the disease. How will it affect those already maniacal or melancholic? Will the shock restore any of the latter to temporary or even perhaps permanent sanity? Such cases have occurred. Meanwhile in the rebuilding of the asylum precautions should be taken against the recurrence of a similar disaster. Where wood enters so largely into buildings as in America it should be rendered non-inflammable by that excellent preparation exhibited at South Kensington under the name of "fire-proof starch," the chemical principle of which is adapted to timber as well as to artificial textures.

CALCAREOUS INFILTRATION OF THE HEART.

DR. COATS, Pathologist to the Royal Infirmary, and Lecturer on Pathology in the University of Glasgow, has recently called attention in the *Glasgow Medical Journal* to two cases of a very rare affection—calcareous infiltration of the muscular fibre of the heart. Indeed, in regard to one of the cases he records, Dr. Coats states that he does not find, either in English or foreign literature, any description of a similar lesion. The lime salts had been deposited in the muscular fibre in the form of minute round granules, the appearance resembling, both to the naked eye and microscopically, that of fatty degeneration. The salt was probably composed entirely of phosphate of lime. The case was one of chronic bronchitis and emphysema, with a possible syphilitic taint. In the other case, the condition of the muscular fibres closely resembled that described by H. Meyer and Förster, and alluded to by Rokitansky. The muscular fibres of the heart, much resembling asbestos in appearance, were converted into rigid cylinders, having a considerably crystalline texture. The lime salt was deposited more homogeneously, and consisted in great part of carbonate of lime, which effervesced on the addition of hydrochloric acid. The morbid specimen was removed from a patient who died of pyæmia.

THE MEDICAL COUNCIL AND UNQUALIFIED PRACTICE.

A CORRESPONDENT writes us in very intense dissatisfaction with the Medical Council for sending him the following reply to a request that the Council would undertake the prosecution of an unqualified practitioner in his neighbourhood:—

"General Council of Medical Education &c.,
"October 9th, 1872.

"SIR,—If an Unregistered person can be *proved* to pretend to be Registered, or to be a Legally Qualified Practitioner of Medicine or Surgery, he can be prosecuted *by any one* before the Magistrates in Petty Sessions, under the 40th Section of the Medical Act (1858), for the Penalty imposed by that section. The Medical Council is not enabled to institute or conduct such Prosecutions, but it will remit a part, or the whole, of any Penalty that may be recovered, towards defraying the expenses of the Prosecution.

"I am, Sir, your obedient servant,
"FRANCIS HAWKINS, M.D.,
"Registrar."

This is certainly not a very encouraging epistle. But it is too much of a piece with the *laissez faire* treatment of unqualified practitioners by the Medical Council to move us as strongly as it seems to have moved our correspondent, who thinks he has paid his registration fee for nothing. Perhaps the italics are the most irritating part of this printed letter. We all know that *any one* can prosecute. What the profession wants is an authority who *will* prosecute, without throwing the invidious duty on those who may be personally interested in the matter, and so disabled from making good prosecutors. If "*any one*" can prosecute, the Registrar can, and, in virtue of his office, should. As our correspondent says, the Law Society does not treat its members so.

THE PUBLIC HEALTH ACT IN THE PORT OF LONDON.

THE City Corporation, as the constituted sanitary authority of the port of London under the Public Health Act, are "hastening slowly." Their Port Sanitary Committee have appointed Mr. Whitcombe, of Gravesend, provisionally to visit any vessels reported to him by the Customs as containing cases of infectious diseases. They have also obtained the loan of the hulk *Rhin* from the Admiralty, and she is by this time, we believe, moored below Gravesend, for the reception of any cases that arrive at the mouth of the river which it may be deemed desirable to detain and isolate. So far, so good. We may fairly presume that, with the assistance of the Customs officers, the introduction of epidemic diseases into the port by means of our *foreign-going* ships will be prevented. This, however, is but a very small part of the work of those who have now sanitary charge of the Thames and its tributaries. From 11,000 to 12,000 coasting vessels, over which the Customs authorities have no inspectorial control, enter, and about the same number clear from, the river every year, and it is this very class of vessels that, as we have had on many occasions to record, has assisted to propagate and to perpetuate the recent epidemic of small-pox, and has carried it from port to port all along the north-eastern shores of the kingdom. The port and the docks are still, as we are informed, under no sanitary surveillance at present, for since the Act came into operation no metropolitan officer of health whose district abuts on the river has now anything to do with the vessels moored in the stream. We believe, however, that Dr. Letheby, as medical officer of health for the City, still continues the systematic inspection of vessels in his old district—i.e., from London-bridge to the Tower-stairs, on the north side of the river. This is of course a mere provisional and piecemeal proceeding, pending the opinion of the legal officers at Guildhall as to the exact boundaries of the port. When this important matter is finally settled, we may look forward to the establishment of a well-considered and properly organised scheme of sanitary supervision afloat that shall redound to the credit of this energetic corporation, and also serve as an example to outports throughout the kingdom.

MEDICAL LEGISLATION IN JAMAICA.

THERE is much misgiving in Jamaica as to the effect of the new Medical Bill. The whole Bill has the appearance of a measure calculated to increase the number of registered practitioners without giving any security to the public of the efficiency of those registered. It betrays an unacquaintance on the part of its framers with the difficulties of testing the validity of diplomas and certificates of registration and the respectability of the bodies which grant diplomas, whose name is legion, and who give their papers for, in many cases, little else than money. Thus, by Clause 16 of the Bill, the Colonial Secretary is to judge of the sufficiency of

the proof of registration in another colony, and of the identity of the applicant. Clause 17 seems to take it for granted that there is a standard of medical education—a sort of yard-measure—kept in the office of Her Majesty's Most Honourable Privy Council, which has only to be applied to the education of an applicant for registration in Jamaica to get a perfect guide for admitting or rejecting him. The Privy Council has no such yard-measure. According to the English Act the diplomas of certain bodies named in Schedule A have to be registered. The General Medical Council may complain of the curriculum or of the examinations of any of these bodies as insufficient, and upon the strength of their complaint the Privy Council may order that any qualification granted by them shall not confer any right to be registered until the points complained of be rectified. The Privy Council is thus supposed to act only on the representation of the Medical Council. It is a matter of immense difficulty to know the exact value of diplomas. Even the Medical Council has its difficulties in gauging the exact value of English ones. And it visits examinations. How much more difficult then must it be for the Council under this Bill to judge of the value of an examination in a remote colony, having no power of visiting and no means of controlling. The only effect of this Bill on sensible colonists, if it become an Act, will be to lead them to regard only British qualifications.

MEDICAL OFFICERS OF HEALTH.

A SERIES of well-considered suggestions as to the duties of medical officers of health in the various union districts appears in Thursday's *Times*. The circumstances, natural or artificial, which affect a locality's health, the soil, climate, situation, and water-supply, on the one hand, and the various sanitary arrangements, industrial employments, and conditions of exposure to disease on the other, will be the *prima cura* of the medical officer of health. In regard to hygienic circumstances of a permanent character, he will have to satisfy himself by personal scrutiny of the correctness of the information supplied to him, and, in doing so, will have need of all available tact in separating his private from his official relations with his neighbours. Should the fear of offending patients who are also landlords or proprietors prevent his impartial performance of duty, it is manifest, says *The Times*, that the conditions of the office must be so modified as to produce the requisite efficiency. For the sources of temporary ill-health he must be on the watch personally or through the medium of inspectors or complainants. Acting in the name of the local authority, he will have many powers which must be exercised so as not to provoke needless irritation. In addition to these responsibilities, he will have to frame an annual report, and to advise the local authority in emergencies. His duties, it will be seen, are sufficiently weighty, and public co-operation and support must sometimes compensate for losses entailed on him by private dissatisfaction. But it is to be hoped that the members of the Local Board and the most influential residents in the neighbourhood will aid in reducing to a minimum the occasion of striking such a balance.

EPHEMERAL LITERATURE AND STUDY.

COMMENTING on the great feats of memory performed by the Hindoo Brahmins, many of whom could repeat more verses than are contained in all the cyclic Greek poets combined, Professor MAX MÜLLER, in his "History of Sanscrit Literature," says that the fact is by no means astonishing if we reflect how strong the memory becomes in the absence of adventitious aids like written or printed books. The daily perusal of a newspaper, he adds, for five years, would serve to break down the most vigorous memory; the constant succession of fleeting impressions allowing none to take strong hold, and thus enfeebling the retentive power. But it is not the memory only that is injuriously affected by an exclusive course of ephemeral reading. The judgment itself, by its rapid transition from subject to subject, becomes perfunctory in its exercise; the faculty of sustained attention is impaired; and a superficial, uninquiring, and far from independent habit of mind is induced. The risk of such a result is, of course, greatest in the youth, whose faculties are still in process of development, whose opinions are unformed, and whose mental turn is scarcely strong enough to resist deflecting influences. The student, and especially the medical student, whose subjects of acquisition are so varied and complex, ought therefore to be as little discursive as possible in his reading, and by all means to reduce to a minimum his perusal of ephemeral literature. Such has been the advice of many wise teachers, Dr. Arnold of Rugby among the rest; and such was the advice of an able lecturer at the opening of one of our metropolitan schools. The advice, however, was questioned by a daily journal; but its arguments were of the most inconclusive kind. If the student wants mental recreation, he can get it in a thousand other ways than by the perusal of articles based on police reports, or of correspondence, however vivacious, from "graphic writers." So we hope the hint imparted to him will not be thrown away; but that he will pursue his studies as Porson did Greek—*stultorum ignavia aut scurrarum dicacitate immotus.*

INDECENT PAMPHLETS AND CIRCULARS.

THE Prosecution Fund set on foot to supply means for bringing the sellers and authors of indecent pamphlets and circulars under the operation of the law, has, we are glad to know, lately received contributions and promises of hearty support from heads of colleges at the universities, and head masters of public schools. None but those who are actually witnesses can conceive the enormous amount of mischief that is done to the young men and lads at our public seminaries by the open distribution through the post of these filthy publications. The head of one of the largest colleges at Cambridge has been compelled to forbid the delivery of such packets at his college, in order to mitigate the evil to some extent. Such publications are notoriously illegal, but the want of a public prosecutor in the administration of our criminal law renders it no one's business to undertake the disagreeable task. Under the auspices of the Society for the Suppression of Vice, a gentleman has originated proceedings, and appeals are, we understand, being sent round to the medical profession and others for contributions to pay the legal expenses of the prosecutions. Mr. Berkeley Hill, 55, Wimpole-street, has undertaken the office of treasurer of the fund.

THE REGISTRATION OF DISEASE.

THE letter of Mr. James Lewis, which appeared in *The Times* of Wednesday, commenting upon and supporting a reference lately made by that journal to the desirableness of a system of registration of disease, opens up a question of very great public significance. Mr. Lewis justly maintains that the chief if not the sole value of the registration of disease would be to afford early knowledge, both to local health authorities and to the central Government, of the outbreak of any forms that might be likely to spread by contagion; so that the occurrence of epidemics might be prevented, and not, as now, only followed by despairing observers of their ravages. Mr. Lewis correctly points out

that this very desirable end can only be attained by the employment of some very simple machinery, since every complication would be in itself a source of delay; and he strongly deprecates the use, at least in the first instance, of any system more elaborate than that which he himself laid before the Royal Sanitary Commission. We fear that, under the present ruler of the Local Government Board, no wise or good measure is likely to be carried into effect; but the operations of the future medical officers of health can hardly fail to pave the way for the attainment of what Mr. Lewis desires. To make early discoveries of disease will be among the most pressing of the duties of these officers, and the value of this branch of their work will doubtless make itself apparent, and lead to its further extension and more systematic performance.

THE CLINICAL SOCIETY.

THIS Society held its first meeting on the 11th inst., and there was a very fair attendance of members. The subject under discussion was almost exclusively medical, though the surgeons essayed to put in their oar, probably with the view of relieving a certain amount of dreariness that pervaded the Society. The authorities on "Chronic Alcoholism" might have afforded some timely and instructive diversion, as Dr. Southey gave them an opportunity in acknowledging that his patient, though by no means an habitual toper, did indulge in "beer for breakfast." A very useful paper might be presented to this or any other of the Societies on the influence of "nips" on the medical and surgical diseases of the upper and middle classes in London.

DRUNK OR ILL?

WHETHER it is that the remarks which we have so frequently had to make upon the conduct of the police in taking persons suffering from illness to the station-house as "drunk and incapable," have led to the issue of any instructions thereupon to the force generally, or whether the particular division on duty in St. Saviour's, Southwark, have more compassionate feelings than their fellows on the north side of the Thames, we have no means of knowing, but there certainly seems to be a marked difference in the procedure with regard to persons found incapable of taking care of themselves in the southern, as compared with the northern parts of the town. On this side, as we know, it is the practice to hale all such off to the station-house straightway on the universal assumption that they are drunk. On that, it seems that everybody so found is presumed to be ill, and is taken to the workhouse for treatment and recovery. At the St. George's Workhouse, Southwark, no less than sixteen persons have, within the past month, been brought in by the police as suffering from sudden attacks of illness, whereas they have all proved to be cases of drunkenness. Dr. Bianchi reports to the guardians that since January he has had eight women in the workhouse all suffering from excessive drink. No wonder the guardians are going to let the Home Secretary know all about it.

NOT PURIFIED BY FIRE.

FIRE is a great purifier, but the late conflagration at Chicago does not seem to have freed that city of a class of advertisers who administer to the wants of vicious and immoral persons, or feed upon the fears of foolish ones. Public announcements occasionally appear in some journals of this country couched in terms that leave no doubt whatever as to their real nature, or disguised by expressions which attract the unwary but fail to conceal their true character from anyone observant of what takes place in the world. Still, it has rarely been our lot to read a series of advertisements of so unblushing and scandalous a character as those which make their appearance in some papers published abroad. A correspondent has forwarded us a column—running like a polluted stream through the paper—which he cut from a copy of the *Chicago Times* issued last month. It is accompanied by an assurance that similar announcements are published in all the other papers of that city. There is a medical institute for the treatment of all kinds of secret diseases, and ladies and gentlemen are urged to send there for works of a certain character, and the former are supplied with mechanical aids for practically carrying out the demoralising lessons inculcated by some people in this country. All the advertisers announce that there are separate parlours for the two sexes, and that consultations are free and confidential. The advertising fraternity are at no pains to conceal the nature of their practices, and it fairly surpasses us how respectable people allow journals disfigured by this garbage to obtain an entrance into their households. We wonder why the heads of families, at all desirous of preserving the purity of their sons and daughters, do not at once consign the foul sheets to the flames. Will the time never come for publications of this nature to be scorched up by the hot indignation of public opinion?

MEDICAL EDUCATION OF WOMEN.

THE lady medical students at Edinburgh seem to court discomfiture, if not to be enamoured of defeat. On Monday, at a meeting of the managers of the Royal Infirmary, a letter was read from Miss Jex Blake, renewing the ladies' request for tickets of admission to the clinical courses of the institution, in accordance with the statute of January 1st, 1872. Mr. George Harrison moved—"That the managers, being of opinion that it is desirable to admit female medical students to the infirmary wards, remit to the House Committee to make arrangements for that purpose, and to report." As an amendment, it was moved by Professor Muirhead—"That, having again heard read the letter of Miss Jex Blake, the managers, without any admission of the regularity or validity of the statute referred to, remit to a committee to consider and report whether, and to what extent, it is practicable to give instruction to females within the wards of the infirmary." For the original motion there voted 4; for the amendment, 8. Miss Jex Blake's application thus again proved abortive.

SCURVY.

THE *Himalaya*, of London, has arrived in the Blackwall Dock with several cases of scurvy on board, and the Board of Trade have directed their medical inspector to make an official inquiry as to the cause of the outbreak. It appears that carelessness frequently occurs as to the quantity of lime-juice shipped for the voyage, so that, if the latter is at all prolonged beyond the average period, the anti-scorbutics as well as other articles run short, and the disease in consequence appears. The shipping of unhealthy hands has also something to do with the perpetuation of scurvy, for that section of the Merchant Shipping Act of 1867 relative to the inspection of seamen is scarcely ever put into force, and has indeed for practical purposes remained a dead letter at all our chief ports, although the official reports on scurvy that have emanated from the Marine Department of the Board of Trade show that in many cases the expenditure of a few shillings would have saved thrice as many pounds, letting alone entirely the humane and sanitary aspects of the question.

THE LICENSING ACT A SANITARY REFORMER.

IT must have rather astonished a number of Bonifaces in Durham to find that under the new Licence Act they are liable to loss or suspension of their licences if their houses are reported by the police to be in bad sanitary condition. The Castle Eden magistrates have taken this matter in hand, and have, in the case of a considerable number of alehouses, allowed a certain time for the remedy of defects, chiefly in respect of closet and urinal accommodation, failing which the licences will be refused. We are glad to hear of this kind of action, and hope it will be generally followed wherever necessary. The *Builder*, from which we derive the foregoing information, avers that "so far as sanitary measures and decent dwellings are concerned, the north of England is as primitive and disgusting as Caffreland"—a statement which we fear is applicable to many mining districts in other parts of the country equally with the north.

THE COLOUR OF FISHES.

THE *Popular Science Review* states that a short paper was read at the British Association by M. Georges Pouchet, "On the Mechanism of the Changes of Colour in Fishes and Crustacea." The author referred to the fact that fishes often change in colour according to the colour of the objects by which they are surrounded, but he explained that this does not take place when the fish is deprived of the nerves that preside over the peculiar corpuscles to which the colour is due. The change does not take place in blind turbots, and in the seeing turbot, if the nerves are divided which communicate between the eye and the skin, the change does not occur. If the fifth nerve be divided, the change takes place all over the body except at the part to which that nerve is distributed. These experiments, M. Pouchet said, show that the change of colour is dependent upon impressions received by the nervous system through the organs of vision.

A SERIOUS outbreak of small-pox is reported to have occurred at Tong-street, near Bradford. The disease, it is supposed, has been imported from Sheffield. The district in which the epidemic has appeared is not, from all accounts, in a very perfect state, regarded from a sanitary point of view; the old difficulty of efficient drainage, among other things, not having been yet surmounted. Meantime the local board would seem to be exhibiting commendable energy in their endeavours to cope with the outbreak in their own district and to prevent it spreading to others.

MR. WALTER THOMPSON has forwarded to the Edinburgh Committee for Securing the Medical Education of Women half of his promised donation of £1000, and desires the money to be applied—"(1) In payment of expenses that have been incurred in prosecuting the claim of women to the highest medical education obtainable in the University of Edinburgh and elsewhere; and (2) in assisting or encouraging lady students who have been subjected to extra charges by the obstacles interposed in Edinburgh."

WE regret that, in consequence of ill-health, the Treasurer of the Royal Medical Benevolent College, Epsom, has resigned his appointment. It is believed that his successor will be Mr. John Lumsden Propert, the son of the founder.

A FURTHER grant of £23,797 has been made by the Metropolitan Asylums Board to the Caterham Imbecile Asylum for the purchase of additional land, the erection of buildings, &c.

THE water-supply question appears to be still agitating the municipal mind of Edinburgh. The members of the Water Trust, though engineers have been employed to investigate the facts bearing on the present method of water distribution, seem hopelessly at variance as to the best course to pursue in regard to the matter, and exhibit symptoms of a desire to remit the whole subject to the hands of the general ratepayers.

AT the dinner given by the officers of the Flying Squadron 1871-72 on the 12th inst., at the London Tavern, the health of the medical officers of the squadron was proposed in graceful and complimentary terms by Rear Admiral Beauchamp Seymour, the late commander-in-chief. The toast, which was very warmly received, was responded to by Staff Surgeon Breen in appropriate language.

WE understand that the Newington Vestry contemplate increasing the salary of their medical officer of health, Dr. Iliff, from £200 to £300 a year. This is a well-deserved tribute to Dr. Iliff's efficiency, and as the action of the vestry in the matter was spontaneous, it has an element of gracefulness not always observable in the dealings of similar bodies with their medical officers.

ON Wednesday Mr. McCarthy, Assistant-Surgeon to the London Hospital, ligatured the common carotid and right subclavian arteries in a man aged fifty, with aneurism of the innominate artery. On going to press we learn that the patient is doing well, collateral circulation having been established. The treatment pursued is strictly antiseptic.

WE are glad to hear that the widow and children of the late Deputy-Inspector-General Bernard, R.N., have, on the recommendation of the Director-General of the Naval Medical Department, been allotted the higher rate of pension, consequent upon Dr. Bernard's death having resulted from exposure on service.

DR. FAIRWEATHER, the sanitary commissioner of the Punjaub, is about to proceed to Peshawur and Kohat, to investigate and report upon the causes of the recent epidemic of cholera.

THE works for the improved drainage of Windsor Castle and Frogmore House are now nearly finished. Her Majesty returns to Windsor next month.

THE annual rate of mortality in London last week was 19 per 1000.

ROYAL COLLEGE OF SURGEONS.

AT a meeting of the Council of the College held on the 17th inst., after the transaction of the ordinary business, the report of the Committee appointed to confer on the 5th Section of the Charter of 1852 (providing for the admission of members of twenty years' standing to the Fellowship) was taken into consideration. The report of the Committee was as follows:—

"Your Committee are of opinion that, looking to the difficulties by which the subject is surrounded, which have been considered in detail by your Committee, it is inexpedient that the Council should exercise the power vested in them by Section 5 of the Charter of 1852."

After a prolonged discussion the report was adopted with three dissentients.

Mr. Busk's resignation of his seat on the Court of Examiners was unanimously accepted in accordance with his earnest wish to be released of its duties; and it was re-

solved that a meeting of the Council should be called on the 31st inst. to elect an examiner in his place.

Sir William Fergusson, in an appropriate speech, moved, and Mr. South seconded, that an expression of sympathy on the part of the Council be forwarded to the family of the late F. C. Skey, Esq., a past President of the College, on the great bereavement they have sustained by his death.

THE NEW MASTER'S HOUSE AT EPSOM COLLEGE.

MR. ERASMUS WILSON, F.R.S., whose name is associated with the endowment of the Chair of Dermatology at the Royal College of Surgeons, laid the foundation-stone of a new Master's house, of which he is the liberal donor, on Friday, the 11th inst., at Epsom College, designed to accommodate fifty lay boys. There were present at the ceremony the Council of the College and the whole School, the Treasurer, Henry Sterry, Esq.; Drs. Jonson, William Carr, Westall, Ramsay, and Hogg; and Messrs. Hird, Freshfield, J. Lumsden Propert, Dale, and Lord; and the Rev. Dr. West, who conducted the interesting and imposing religious ceremonial. The design of the building is Elizabethan, and in strict harmony with the other portions of the College; Mr. George Elkington, F.R.I.B.A., of Cannon-street, being the architect, and Mr. Shepherd, of Bermondsey, the contractor. The cost of the house is estimated at £5500.

After the conclusion of the ceremony Mr. Wilson delivered the following address:—"The origin of Epsom College is so well known to every one present that I need not dilate on that matter here. It traces its source to the benevolent exertions of a man of large heart and remarkable energy—one who was pleased to call himself a 'poor Welsh apothecary.' No man better than Propert knew the laborious nature of the medical profession, its anxieties, its cares, its responsibilities, and the extremely moderate remuneration of its members. And it was the close observation of that profession, and the contemplation of its difficulties and vicissitudes, that doubtless suggested to his mind the foundation of an institution that should relieve its decayed members, and infuse fresh life into its body by affording a thorough education to its sons. In this great undertaking Mr. Propert took counsel of several good and true men, members of his own profession, and equally acquainted with himself with its necessities; and the result of their joint labours was the creation of a college or school that not only fulfilled the objects that the Council had in view, but attracted the attention of the public, and commanded the services of eminent men as teachers in its several departments. The Epsom College of the present day, like other public schools, has its emulative contests, its games, its plays, and even its literary paper, and its scholars have so distinguished themselves through the aid of competent masters, that the want has come to be felt of accommodation for other pupils than those on the foundation. The advantage of such an addition to the College has been generally appreciated. It has been thought that the medical element in the school would receive benefit by an association and intercourse which was not exclusively medical, while the public at large might feel confident that the practical nature of an education provided for the sons of medical men would be the very best to give their own sons as a preparation and an opportunity for fighting the battle of life in the outside world. The promotion of this object is the intention of our meeting to-day, and the stone which has just been laid is to commemorate the extension of the educational powers at Epsom College. It is hoped that the first master's boarding house will speedily be filled with youthful minds eager for knowledge, and that before very long a second house will be needed and another member of our profession will be inspired with the desire to 'go and do likewise.' To my young friends whom I see around me I will venture to put the question, whether you would wish to be the possessors of the 'philosopher's stone' or the far-famed 'lamp of Aladdin'? I doubt not that this thought—that this wish has occupied your minds more frequently than once. I will now tell you how you may realise it, and how you may secure an honourable competence, and possibly a considerable fortune. That 'philosopher's stone,' that 'lamp of Aladdin,' is knowledge. Let every day of your lives, and every hour of each day, be devoted to the acquirement of some portion of knowledge, for by means of knowledge properly used and properly directed, everything which fortune can bestow will be brought to your feet. You may be ministers of state, reverend divines, distinguished lawyers, eminent physicians or surgeons, victorious officers, or successful merchants. It may be asked why, if knowledge be capable of accomplishing such great things, every student does not eagerly seek for it and possess himself of it. To which it may be replied—Why, indeed? for the zealous searcher after knowledge is truly as 'him that has,' for 'to him shall be given' more; none is so great a favourite with the master as he who seeks to partake of his knowledge, and to him who thus honourably and honestly solicits, all will be freely given and cheerfully bestowed. As, therefore, our work of this day is to increase the usefulness of the one, but, nevertheless, the great educational institution of the medical profession of England, I shall conclude with the simple but heartfelt invocation—'May God prosper our work.'"

Subsequently the Council and College authorities dined together in the Propert Library, when, in reply to his health, received with the warmest applause, Mr. Erasmus Wilson said that his gift was but the expression of his indebtedness to the profession of medicine, to which he owed everything.

TESTIMONIAL TO MR. HENRY HANCOCK, SENIOR SURGEON TO CHARING-CROSS HOSPITAL.

AN influential meeting of the governors, medical officers, and others connected with Charing-cross Hospital was held in the board-room of that institution on Wednesday to consider what steps should be taken to acknowledge the long and valuable services of Mr. Hancock, both to the hospital and to the medical school.

Mr. Hird and Mr. Bosanquet were appointed the treasurers of "The Hancock Testimonial Committee," while the secretarial duties were assigned to Dr. Headland, Dr. Pollock, and Mr. Woolcott, the secretary of the hospital.

Although the movement has arisen in connexion with Charing-cross Hospital, it is not intended to confine it to persons connected with that institution, but the friends of Mr. Hancock throughout the profession are invited to co-operate in the movement. The testimonial will probably assume the form of a picture, to be painted by one of our first artists. Subscriptions will be gladly received by either of the treasurers or secretaries.

Correspondence.

"Audi alteram partem."

THE SANITARY STATE OF JERSEY.

To the Editor of THE LANCET.

SIR,—As your Special Commissioner in Jersey has not promised to extend his inquiry to the adjacent islands, I take the liberty of requesting you to insert the following remarks, which indirectly offer corroborative testimony to his very just comments on the sanitary state of that island. They also serve to dispel the inference perchance engendered by the report in the public mind, that, being in such close proximity, we are no better behaved than our neighbours. Neither island possesses any great superiority over the other as regards geographical position. Although Guernsey is smaller and more distant from the Continent, and therefore warmer in winter and cooler in summer, Jersey obtains no small compensation in the difference of aspect of the respective towns, St. Heliers lying south-west, and St. Peter

Port looking towards the east. The chief town of Guernsey lies in a valley sloping towards the sea, upon the two sides of which and the adjoining undulating ground are built the houses constituting the town. But the essential advantage which Guernsey enjoys is in the possession of a comprehensive system of drainage, in connexion with the harbour, which has been completed within the last few years. The natural advantages of a gentle declivity have enabled the island authorities to carry through, at no very great additional outlay, this undertaking. The town of Jersey lies also in a valley, but the gradient is so slight as to be scarcely perceptible, and, in consequence, it is imperfectly drained. Improvements in the harbour accommodation are in contemplation, and I hope that the opportune remarks of your Commissioner will rouse the authorities from their supineness. It is not without a feeling of self-interest that I express this hope, as Jersey has for many years enjoyed amongst us the unenviable reputation of being the channel through which many of our epidemics are imported. Not many years since, a case of typhoid fever, contracted in Jersey, was admitted into our hospital, and the disease spread to many of the inmates of the institution; and I am at present in attendance on the son of a medical man who is lying dangerously ill with continued fever, caught, as his father believes, in Jersey. The water of the neighbourhood where the family lodged was by general consent condemned as impure, for many cases of bowel complaint and fever had recently occurred in the vicinity; but no authoritative prohibition, as the removal of the pump-handle, had been resorted to, so that from its accessibility the water was probably still used. Having held the office of surgeon to the hospital and out-door poor of the parish for ten years, I am enabled to speak very positively of the very great freedom from continued fevers, as well as from diarrhœa, in this town. I cannot remember more than eight or ten cases of typhus in that period, and typhoid may be considered as almost equally rare. These fevers are more common in the country, where cesspools and all manner of abomination abound. A few years since, in answer to inquiry, I ascertained that the average mortality for a period of eight years was 17·9 for the town and 17·1 for the country per 1000. That a seaport town, where drunkenness and other vices are, I grieve to say, flourishing, should exhibit a less mortality than Eastbourne and Worthing speaks volumes in praise of our sanitary arrangements. I think that this evidence will go far to show that there is a local, and, happily, preventable, cause in Jersey for the present high rate of mortality, the recognition of which must stimulate the authorities to exertion without delay. I regret to say that the same apathy exists amongst us with reference to the registration of deaths. That this indifference is an encouragement to murder no one will deny.

I remain, Sir, your obedient servant,

Guernsey, Oct. 3rd, 1872. FRANCIS E. CAREY.

ELEVATION OF DEPRESSED CRANIAL BONE BY PNEUMATIC TRACTION.

To the Editor of THE LANCET.

SIR,—My thanks are due to Dr. W. J. Mickle for his letter on the above subject in the last number of THE LANCET.

The quotation from Gross therein contained does these two things: it disabuses me of the impression that I was the first to employ pneumatic traction for the purpose reported; and, that which is of much greater importance, it in my opinion gives very material support to my proposition of extended application of the principle. Unlike your correspondent, I have not had the advantage of seeing either Gross's System of Surgery or the *Dublin Medical Press* of September, 1853. Had I done so I should certainly have quoted the case from the latter publication in support of my views. If, in a child two years old, a cranial depression which was "*deep, narrow, and three inches in length*" (as apparently unmanageable as it was singular) was "promptly raised" by pneumatic traction, it is highly probable that most cases of depressed fracture of the skull would prove amenable to this mode of treatment. The only exceptional cases would, I think, be those in which lesion of the dura mater is existent, or osseous fragments likely to produce such lesion, and hæmorrhage which the rim of the cupping-glass would not control.

I am, Sir, yours obediently,

Bilston, Oct 14th, 1872. H. W. LARKIN, L.R.C.P., M.R.C.S.

BIRMINGHAM.

(From our own Correspondent.)

THE death-rate of this borough for the past week (26·7 per 1000) is considerably above the average. Of the 179 deaths, 31 were referred to diarrhœa, 16 to scarlatina, 10 to fever, and 5 to small-pox. There are still 33 cases of the latter disease in the Small-pox Hospital. Mr. Burton, who had resigned his office as surgeon to this department, in consequence of the reduction of his stipend, has been asked by the guardians to continue his services.

Canon Kingsley, in his introductory address as President of the Midland Institute, did good service to the public and to the profession in urging a more general study of physiology and of the laws of health. This address was a great success, and elicited the warmest applause from one of the largest audiences ever seen in the Town-hall.

This evening, Professor Humphry, M.D., of Cambridge, delivers the first of two lectures "On Sleep," and on Wednesday Dr. Russell Reynolds gives the inaugural address at the Midland Medical Society. Mr. Bassett and Dr. Thomas have been appointed respectively president and secretary of the latter society for the ensuing year.

The annual report of the Council of the Midland Medical Society was presented on the 9th inst. It gives a favourable account of the past session, and states that there are at the present time ninety Fellows and twenty-four members. It expresses regret at the resignation of Mr. W. S. Mann and Dr. Sawyer as honorary secretaries, and thanks the retiring President "for his punctual attendance and numerous contributions."

The number of entries at Queen's College this year is below the average. The old students have returned, and clinical work has been resumed at the hospitals. Many operations have recently been performed, a brief notice of which may not be uninteresting.

At the General Hospital, Mr. Bartleet has removed a mulberry-stone weighing over two ounces from a man aged twenty-one, by the lateral operation, and the patient has done well.—Mr. Goodall has performed the same operation on a boy aged four years, removing a lithate calculus of two drachms. The urine has flowed by the urethra ever since the operation, and the child is now well.—On the 9th, Mr. Pemberton removed a large lipoma from the left shoulder of a woman, and also performed castration on a man, aged twenty-nine, for syphilitic disease of four years' standing. There was abundance of yellow fibrinous material in the interior of the testis, and a large cyst containing yellowish fluid on the anterior surface of it.—In the medical side there is also an abundance of good cases. At the General Hospital, under Dr. Fletcher's care, here is a girl, aged ten years, with an affection of the right side of the heart. Since birth she has suffered from dyspnœa on the slightest exertion. There is no cyanosis, but pulsation in the jugulars. There are numerous nævi in various parts of the body, showing an abnormality in the development of the vascular system. A loud systolic murmur is heard, loudest midway between the left nipple and the left edge of the sternum. It is louder over the second left costal cartilage than over the second right.—Under D. Russell's care there is a case of double pleurisy, which has come on without any assignable cause, and is accompanied by a very copious deposit of lithates. Also a case of recovery from empyema after five months' illness, by tapping. The empyema had burst anteriorly before admission but the patient showing no improvement for some time, the chest was tapped posteriorly by Mr. Bartleet, and a large quantity of pus was drawn off, and a drainage-tube passed from front to back. In a severe case of typhoid fever, the high temperature was brought down by "Roberts's refrigerator."—Under Dr. Wade there is a case of ague, were the specificity of quinine as an antiperiodic in this disease is

well marked.—Dr. Balthazar Foster has been treating a case of diabetes insipidus by belladonna, which reduced the diuresis one-third. The treatment of diabetes mellitus by codeia was without good result. Under the same physician there has lately been a case of aortic aneurism of rapid growth, in a woman aged twenty-three.

At the Queen's Hospital the following operations have been done during the past week:—Removal of nearly the whole of the shaft of the tibia in a boy aged ten, for necrosis; and partial amputation of the foot for a circular-saw injury, by Mr. West. Excision of the elbow for caries of that joint, by Mr. Gamgee. Ligature of the femoral artery for elephantiasis of an old stump, by Mr. Furneaux Jordan. A catgut ligature was used, and the wound treated antiseptically. Four days after the operation the limb was reduced to two-thirds of its former size. Dr. Sawyer has recently had under his care a very interesting case of cerebral tumour in a man aged twenty-nine years, the symptoms of which had only existed for twelve weeks. Post-mortem examination revealed a hydatid cyst as large as a walnut at the base of the brain. Dr. Heslop has commenced the winter session by a course of lectures, delivered twice a week, on organic diseases of the abdominal viscera, illustrating them with several interesting cases at present in the hospital. Dr. Johnston is successfully treating cases of acute rheumatism by injecting per anum solutions of bicarbonate of soda.

Birmingham, Oct. 14th, 1872.

PARIS.

(From our own Correspondent.)

IN a recent letter I mentioned the extraordinary results of experiments on septicæmia which Dr. Davaine communicated to the Academy of Medicine in one of its late sittings. It is the great medical topic here, and the facts are so very striking that they well deserve to be noticed. The subject was taken up for discussion on Tuesday last at the Academy. If you remember, the main point brought out by M. Davaine's experiments was that a drop of a trillionth dilution of septicæmic blood taken from a guinea-pig or rabbit was enough to produce death when inoculated in an animal of the same kind. M. Davaine on Tuesday last brought before the Academy the results of further experiments which he had carried on, with the object of making out whether the results of inoculation were similar on various other animals, and what was the duration of the toxic action of putrefied blood.

The author stated that the first question must be answered in the negative. Rats were harder to affect than rabbits and guinea-pigs, whilst pigeons and fowls were quite unaffected. Furthermore, it appeared that the intensity of the affection produced by the introduction of putrefied blod into the system of an animal was not in proportion to the bulk or size of the animal, but to the character of its internal disposition. In respect to the second question, and more particularly as to what was the condition which gave extraordinary virulence to the blood of an animal inoculated with a putrefied substance, M. Davaine stated "that the newest blood was the most virulent, that the degree of septicity of blood putrefied in the open air and in ordinary conditions was not in proportion with the intensity of fetor, and that, far from becoming more and more toxic as it grew old, it lost after a few days part of its virulence.

M. Boule then communicated the results of some experiments which he has undertaken with M. Davaine on the same question, as regards inoculation on the larger animals, and also for the purpose of confirming M. Davaine's results on the smaller ones. He stated that a horse, a guinea-pig, and four rabbits had been inoculated with infinitesimal dilutions of putrefied blood. The horse was still alive, though it had shown illness after the inoculation. The guinea-pig never seemed to be affected at all, whilst the four rabbits died a few hours after the inoculation, uttering screams like those of animals affected with charbon. Furthermore, M. Bouley said he had inoculated four horses each with ten drops of septicæmic blood, and purposed to relate at the next meeting the results which will have taken place.

A discussion ensued bearing principally upon theoretical questions of disease (pyæmia, &c.) in connexion with M. Davaine's experiments, and which present scarcely any practical interest.

The health of Paris is good. Disorders of the respiratory system are beginning to be frequent; but there is no sign of any epidemic disease.

Various reports were circulating here touching the health of Marshal Bazaine, who is still in captivity awaiting his trial. Some reports stated that the Marshal was suffering from want of exercise, and from anxiety of mind; whereas others went so far as to assert that the Marshal was carrying out a system of gradual self-destruction, so as to escape his trial. It appears, however, that his only complaint is an occasional pain in the left side caused by a wound which he got in one of the battles around Metz from the fragment of a shell.

Preparation is being made at the School of Medicine for the reopening of the Faculty, which will take place on the 1st of next month.

Baron Larrey has been appointed a member of the Superior Council of War, recently organised at the War Department. As this council is intended to examine all the general measures relating to the army, its *personnel*, *matériel*, armament, administration, and contracts, it may be presumed that the appointment of a medical member betokens an intention to examine seriously all the questions relating to the better organisation of the medical department of the army.

Paris, Oct. 15, 1872.

BORDEAUX.

(From an occasional Correspondent.)

(Concluded from page 545.)

M. ALEXANDRE LÉON addressed the Assembly on the industrial progress of the Landes, and spoke of the improvements which science was called upon to promote in this part of France. Formerly the Landes (several departments which stretch from Bordeaux to the Pyrenees and the ocean) were a desolate tract of country, thinly inhabited and almost barren. The railways of the South of France and the American war have given extraordinary importance to the pine-woods which cover the Landes, and since then the manufacture of resin, tar, and various chemical products, and the supply of wood for various purposes, have been gradually enriching the formerly wretched population of this district. The various applications of science to industry would, said the orator, add a finishing touch to this era of prosperity.

The President read an address sent to the Association by the Russian naturalists met at Moscow to celebrate the two hundredth anniversary of Peter the Great, and an appropriate answer was drawn up by the Board, and voted by the Assembly.

Dr. Lefort delivered a most able address "On the Organisation of the Sanitary Service of the Army and the Rôle of Societies for the Wounded during War." As this speech sums up the chief points of Dr. Lefort's book, recently published in Paris, and analysed in a late number of THE LANCET, there is no need to dwell upon it in this brief letter.

Dr. Azam, the general secretary, thanked the various members who had come down to Bordeaux, in the name of their colleagues of the locality. He said that the Bordeaux members would appoint a local committee to be in constant communication with the General Association.

In the evening, at 8 P.M., all the members met at the Town Hall, where refreshments were provided by the Bordeaux municipality, and several bands of music were in attendance. The reputation of the Bordelese for music was well sustained on this occasion. The refreshments were most varied and beautifully served up. What with the lay persons invited (ladies and gentlemen) and the members, I should say there were about 1000 persons present.

On the last day of the session, Sept. 12th, the various sections met as usual at 10 A.M.

In that of Medicine, Dr. Laude read a paper on Scurvy;

Dr. Gasquet one on Hydrophobia; Dr. Oré related his beautiful experiments on Venous Injections of Chloral and Strychnia (which have been recorded in recent numbers of THE LANCET). Professor Bouillaud, who was present, complimented Dr. Oré on the value of his researches, and vindicated fallen France's reputation for producing *savants* who are still among the leaders of science and civilisation.

Dr. Laborde, in a brilliant extemporaneous discourse, noted the chief rules and means for carefully conducting scientific experiments. Dr. Segay, of Bordeaux, communicated a paper on "The Applications of the Sphygmograph to the Treatment of Aneurisms," and Dr. Beaudrimont a note "On Digitalis and Digitaline."

The meetings of the section were then declared closed.

The other sections were well attended, and presented various features of interest. In one of the sections Dr. Fontaine, of Paris, communicated a plan for establishing air-baths in hospitals.

The general sitting which took place in the afternoon was purely administrative. Several committees were nominated, and Lyons was chosen for the place of meeting next year.

After this the members dispersed, some to attend the excursion to Spain, the majority to visit the places of interest which abound in the department, and to partake of the hospitality so liberally offered by the profession and *savants* of Bordeaux.

Thus terminated this meeting of the French Association, of which a memorable account will be kept, not only as having been the first in this country, but especially for its great success in numbers, scientific importance, pleasant excursions, and cheerful recollections of Bordeaux hospitality, good cheer, and lovely scenery; to which I regret that the small space allotted me has not allowed me to do full justice.

Bordeaux, October, 1872.

SWITZERLAND:

A GLIMPSE AT ITS UNIVERSITIES, HOSPITALS, AND BATHS.

(From our Special Correspondent.)

"A BRIGHT old city on a fresh green lake; white houses nestling in the midst of trees; quaint streets, arcades, and spires; grim minsters looking down on shop and stall; wide quays and bridges, piers and water mills; old convents, walls, and towers; new colleges, hotels, and railway lines; the records of a thousand years, the fancies of a passing day; a church of Charles the Great, a palace of the modern arts; ..... and in the front, beyond the stretch of shining lake, a rugged line of Alps, all swathed and lit with snow, is Zurich city, capital of Zurich Canton, and a paradise of learning and of learned men." Such is Mr. Hepworth Dixon's graphic sketch of this famous town. None will doubt its correctness, and few who have made even the most casual survey of its university or of its colleges and schools will dispute the conclusion he has arrived at—that Zurich is a "paradise of learning and of learned men."

The university was established in 1832, and became the home of many men of distinction who were exiled from their own countries for their political opinions, but who here were gladly welcomed as teachers and professors in the various departments. The medical school is one of the best in Europe, and ranks among its professors some of the ablest men of the day. Billroth has unfortunately gone; but his place, as professor of surgery, is well supplied by Professor Rose, a man of great eminence; Gusserow, the professor of midwifery, is one of the picked men selected by the German Government as professor at Strasburg; Professor Hermann, the author of one of the clearest and most scientific text-books on physiology in the German language, teaches physiology; Frey, histology; Biermer, clinical medicine; Meyer, anatomy,—these and several others shed a lustre on the school of medicine which makes it both desirable and attractive as a place of study for the rising physicians and surgeons, not only of Switzerland, but also of many other countries. The students are able to dissect every part of the body twice during their two sessions of anatomy. In the hospital practice every student in his second session of attendance on clinical medicine has a certain number of beds allotted to him. He is expected to make himself acquainted with the history of the cases, to make the diagnosis of the various diseases, and to give the prognosis and treatment of the same when called upon by the professor so to do. In surgery and gynæcology each student is called upon in turn to examine a case, seen then for the first time, and to give the diagnosis and treatment. After attending midwifery cases, each student is expected to hand to the professor written accounts of the same. In the Polyclinik the students visit the patients at their own homes, and have the entire charge of them, only applying to the professor in case of doubt.

Zurich University is peculiar in permitting and in encouraging the attendance of lady students. The number of the male students in 1872 is 151; of female, 51. No inconvenience is experienced in their joint attendance on the various classes and demonstrations. The authorities having been applied to in the year 1870 by the Medical Faculty of Wurtzburg as to "whether any unpleasantness had arisen from women together with male students attending certain lectures and demonstrations, necessarily of an embarrassing nature to the delicacy of women," replied as follows:—"With reference to this question, the Medical Faculty of the University of Zurich find that the presence of lady students in the theoretical and practical courses has given rise to no disturbance whatever. The lectures and demonstrations are given without any regard to the ladies present, and the anatomical practice and clinical demonstrations are gone through as thoroughly as when in presence of a male audience only. Notwithstanding this no unpleasant occurrence has ever taken place. Seeing that the Faculty has already had an experience of six years' duration, they look forward tranquilly to the further solution of the still unsolved problem. The professors believe that to the earnest love of work and tact displayed by the ladies studying here, as well as to the political education and peaceable disposition of the Swiss students, the above favourable results are to be attributed." Such testimony is of high value, and should help to remove some of the prejudice which exists in England against the admission of ladies to the study of the medical profession. Six ladies have already graduated in this university—namely, two Russians, one American, and three English. Of the latter number one has recently been afforded a recognition, and been given an opportunity of public usefulness in hospital practice in England.

Written and *viva voce* examinations are held in the following eight subjects—anatomy, physiology, pathology, medicine, surgery, materia medica, midwifery, and medical jurisprudence. The written papers occupy about a week, and the *viva voce* examination about two hours. A preliminary or matriculation examination is required from Swiss students, but not from foreigners—a distinction the wisdom or propriety of which seems to be doubtful.

The General Hospital is a fine building, situate on a hill overlooking the town and lake, and in the immediate vicinity of the Polytechnic Institute. It contains about 320 beds, 136 of which are used for clinical instruction—viz., 48 for medicine, 72 for surgery, and 16 for syphilis. The Fever Hospital, containing about 30 beds, is situated some 500 yards from the General Hospital.

The Lying-in Hospital consists of two buildings—one devoted to midwifery cases only, and containing 28 beds, and the other to gynæcological cases, and having 24 beds.

There is also an Asylum for the Blind, Deaf, and Dumb; and at a distance of two miles from the town is a handsome Lunatic Asylum capable of accommodating 250 patients, and considered to be one of the finest institutions of the sort in Germany or Switzerland.

With regret must any student leave a city offering so many great natural and scientific attractions, and that regret will be shared even by those who have but the chance of paying a flying visit to the birthplace of Pestalozzi, of Lavater, and of Gessner.

DONATIONS, &C., TO MEDICAL CHARITIES.—The Jewish Convalescent Home, South Norwood, has received £1000 from "J. C. H." The British Home for Incurables has received a fourth £1000 from "C. D. T." The East London Hospital for Children, Ratcliff-cross, has received a fourth £1000 from "H. G." The Royal Hospital for Incurables has received £1000 from "R. G. Y."

Medical News.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 3rd and 10th inst.:—

Jennings, William Oscar, Trinity-square, Borough.
Moore, Henry Cecil, Kings Norton.
Pearde, Henry, New Romney, Kent.
Smith, Thomas Bower, University College.
Talbot, Russell Main, Guildford-road, Poplar.

As Assistant in Compounding and Dispensing Medicines:—

Pearce, Percy, Guilford-street.

QUEEN'S UNIVERSITY IN IRELAND. — At a public meeting of the University held at Dublin Castle on the 10th inst., the following degrees were conferred by the Marquis of Kildare:—

DOCTOR IN MEDICINE.

FIRST CLASS.—John Knox Houston, John Magrath, Richard J. Anderson.
SECOND CLASS.—Michael Joseph Malone, Horace Maybury.
THIRD CLASS.—John Strahan.
PASSED.—John George Adamson, Archibald Adams, George W. F. Armstrong, Jas. Battersby Bailey, George Barkley, Philip Lambert Benson, Samuel Browne, John Bryans, Robt. Evans Burges, John Burke, Robt. Campbell, N. Whistler Colahan, John G. Collis, Timothy Crowly, Hugh Alexander Davis, Richard Davis, Jas. Scott Dill, John Fleming, Henry A. Fogarty, Charles Forsythe, Michael J. Gillespie, James Graham, John Hegarty, William Hickman, John Jas. Holland, James Hurley, Samuel Johnston, H. Maturin Johnstone, Francis B. Kane, John Richd. Leech, Charles Albert Macaulay, Samuel M'Cutcheon, Denis Peter Mac Donald, Samuel M'Kee, Peter John M'Quaid, Patrick J. Macnamara, Henry J. Madders, John A. Malcomson, William Molloy, Timothy Molony, W. E. Bonsall Moynan, Douglas Mullen, Robert John Munro, Bartholomew O'Brien Patrick O'Connell, Bernard O'Connor, Simeon Holgate Owen, Thos. Patterson, Richard Read, Jas. Ring, I. Nashville Ryan, J. Moore J. Scott, William Simpson, Wm. John Smyth, Thos. Francis Sparrow, William F. Spencer, William Thomson, John Wheeler, Thomas Bam Whitton, Hugh Charles Wilson, Alexander Wylie.

MASTER IN SURGERY.

Archibald Adams, John Geo. Adamson, Samuel Agnew, George Barkeley, Moses Black, Samuel Browne, John Bryans, Robt. Evans Burges, N. W. Colahan, John G. Collis, Timothy Crowly, Richard Davis, Hugh Alex. Davis, James Scott Dill, William Fleming, Henry A. Fogarty, James Graham, John Hegarty, William Hickman, John James Holland, James Hurley, J. Knox Houston, Francis B. Kane, John Richard Leech, Chas. Albert Macaulay, Saml. M'Kee, Denis P. M'Donald, Saml. M'Cutcheon, Horace Mansell Maybury, Peter J. M'Quaid, Timothy Molony, W. E. Bonsall Moynan, Bartholomew O'Brien, Patrick O'Connell, Bernard O'Connor, Thomas Patterson, Richard Read, James Ring, J. Moore J. Scott, William F. Spencer, John Strahan, William Thomson.

COLLEGE OF PHYSICIANS, IRELAND.—At examinations held on the 8th, 9th, and 10th inst., the following gentlemen obtained the licences in Medicine and Midwifery:—

Brabazon Shiels Booth, Wm. Parkinson Counsellor, James Daniel, James Charles Weld.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The first meeting of the session will be held on Saturday, October 19, at 7.30, when the president, Dr. Henry Letheby, will deliver an address, entitled "Sanitary Legislation of 1872."

THE annual dinner of the Liverpool Royal Infirmary School of Medicine was held on the evening of October 1st, Dr. Waters (the president of the institution) occupying the chair. The festival was largely attended, about eighty members of the profession being present.

SPALDING UNION INFIRMARY.—This infirmary, which had been recently enlarged at a cost of several thousand pounds, was accidentally set on fire on Monday last, by a flue which passed through the store-room. The patients were fortunately rescued, and carried up to the union house. The centre block of buildings was completely destroyed, and the fire extended along the whole range of the roof of the wards on both sides. The infirmary was fitted up with every modern convenience, making up sixty-eight beds, having a cubic space of 700 feet for each patient, and is under the charge of Dr. Morris, of that place. The building is amply insured.

WE wish to call attention to the Photographic Portrait Gallery of Messrs. Fradelle and Marshall, of 230, Regent-street, which will open during the ensuing week with a very large collection of portraits of contemporary celebrities. Among these the medical profession will, we hope, be fully represented. Few sights will possess so much interest, to foreign and other visitors to the metropolis, as a really good collection of the portraits of living persons of eminence in their respective departments; and, in order that such a collection may indeed be good, it is essential that it should be, as far as possible, complete.

Medical Appointments.

ADAMS, J., M.R.C.S.E., has been appointed Midwifery Assistant to St. Bartholomew's Hospital.
ANTHONY, T. G., M.R.C.S.E., has been appointed Medical Officer of Health for Bedwellty, Monmouthshire.
AUTEY, W., M.R.C.S.E., has been appointed Medical Officer for the Middlezoy District of the Bridgwater Union, vice F. J. C. Parsons, L.R.C.P.L., M.R.C.S.E., whose appointment has expired.
BONSER, J. H., M.R.C.S.E., has been appointed District Surgeon to the Salford and Pendleton Royal Hospital and Dispensary, Salford, Manchester, vice Shearman, appointed House-Surgeon.
BREWER, R. E. W., M.R.C.S.E., has been appointed a House-Surgeon to St. Bartholomew's Hospital.
BRIDGWATER, Dr. T., has been appointed Medical Officer and Public Vaccinator for the Harrow District of the Hendon Union, vice T. Hewlett, F.R.C.S.E., deceased.
CRIPPS, W. H., M.R.C.S.E., has been appointed a House-Surgeon to St. Bartholomew's Hospital.
DOMVILLE, E. J., L.R.C.P.L., M.R.C.S.E., has been appointed House-Surgeon to the Devon and Exeter Hospital, vice Tosswill, resigned.
DOUGALL, J., M.D., has been appointed Medical Officer of Health for the Burgh of Kenning-park, Glasgow.
DUNN, W. A., M.R.C.S.E., has been appointed House-Surgeon to the Carlisle Dispensary, vice J. Rooch, M.B., C.M., resigned.
EADY, G. J., M.R.C.S., L.R.C.P., has been appointed Medical Officer and Public Vaccinator for the Parndon and Roydon Districts of the Epping Union.
EDWARDS, W. J., M.B., C.M., has been appointed Junior House-Surgeon to the Preston and County of Lancaster Royal Infirmary, vice G. Tait Dickson, M.B., C.M., resigned.
HALL, F. DE HAVILLAND, M.B., M.R.C.S.E., House-Physician at St. Bartholomew's Hospital, has been appointed Physician to the Metropolitan Dispensary and Charitable Fund, Fore-street, vice E. Smith, M.D., M.R.C.P.L., resigned.
HARDING, Dr. (of the Middlesex Hospital), has been appointed House-Physician to the Hospital for Women, Soho-square, vice G. A. Phillips, M.R.C.S.E., resigned.
KIDDLER, W. A., L.R.C.P.L., M.R.C.S.E., has been appointed Resident Medical Officer to the London Hospital, vice S. Mackenzie, M.R.C.S.E., resigned.
LAWTON, H. A., L.R.C.P.L., M.R.C.S.E., has been appointed House-Surgeon to the Westminster Hospital, vice J. E. Barton, M.R.C.S.E.
MOORE, H. C., M.R.C.S.E., has been appointed House-Surgeon to the General Infirmary, Hereford, vice B. P. Morison, M.R.C.S., L.R.C.P., L.M., resigned.
MOORE, M. M., L.R.C.P., M.R.C.S., has been appointed Surgeon to the Coventry and Warwickshire Hospital, vice E. Dewes, M.D., resigned.
MORRIS, D. E., M.R.C.S.E., has been appointed Assistant Medical Officer to the Hereford County and City Lunatic Asylum.
MORRIS, S., M.R.C.S.E., has been appointed a House-Physician to St. Bartholomew's Hospital.
PHILPOTS, J. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for District No. 4 of the Poole Union.
POIGNAND, M., M.R.C.S.E., has been appointed a House-Surgeon to St. Bartholomew's Hospital.
SHEARMAN, W. M., M.R.C.S.E., has been appointed House-Surgeon to the Salford and Pendleton Royal Hospital and Dispensary, Salford, Manchester, vice Latham, resigned.
SMITHIES, J. J., L.R.C.P.Ed., L.F.P. & S. Glas., has been appointed Medical Officer to the Workhouse, Clitheroe Union, Lancashire.
STOCKER, C. S., M.R.C.S.E., has been appointed House-Physician to the Seamen's Hospital, Greenwich, vice Lyell, whose appointment has expired.

Births, Marriages, and Deaths.

BIRTHS.

ANDERSON.—On the 8th ult., at Bangalore, Madras Presidency, the wife of D. H. B. Anderson, M.D., Army Medical Staff, of a daughter.
BOND.—On the 14th inst., at Parliament-street, the wife of Thomas Bond, F.R.C.S.E., of a daughter.
DRURY.—On the 6th inst., at Pelham St. Mary, Norfolk, the wife of Chas. D. Hill Drury, M.D., of a daughter.
HEATH.—On the 4th inst., at Aldershot, the wife of R. E. Heath, M.D., Connaught Rangers, of a daughter.
SMITH.—On the 9th inst., the wife of J. Smith, M.R.C.S.E., of Elgin-road, Notting-hill, of a son.

MARRIAGES.

BUSS—DIX.—On the 9th inst., at Christ Church, Highbury, Henry Buss, M.D., of George-street, Hanover-square, to Jane, daughter of Thomas Dix, Esq.
PARSONS—MARSHALL.—On the 7th inst., at the British Legation, Stuttgart, George Parsons, M.B., of Hawkshead, to Marianne Jefcoate, daughter of the late Joseph Marshall, Esq.

DEATHS.

CARSON.—On the 2nd inst. (killed in the railway accident at Kirtlebridge), Dr. John Carson, of Galt, C. W., formerly of Mennoch-bridge, Sanquhar, Dumfriesshire.
DUGUID.—On the 7th inst., A. R. Duguid, M.D., L.R.C.S.Ed., aged 73.
M'COWAN.—On the 6th inst., at York-place, Edinburgh, Francis Da Cruz M'Cowan, M.D., aged 53.
MOONE.—On the 9th inst., N. Moone, M.R.C.S.E., of Stoke, aged 70.
PALMER.—On the 15th inst., Francis P. Palmer, M.R.C.S.E., of Bridgeman-place, Walsall, aged 64.
SMITH.—On the 8th inst., at Saltash, A. Smith, Surgeon R.N., aged 64.
TANNER.—On the 15th inst., at Castle Godwyn, Painswick, Gloucestershire, Robert Tanner, M.R.C.S.E., formerly of Manchester-street, Manchester-square, London.

Medical Diary of the Week.

Monday, Oct. 21.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8 P.M. Opening of the 100th Session. Communications by the President (Mr. Thos. Bryant), Dr. Richardson, Dr. Wiltshire, Mr. Francis Mason, and others.

Tuesday, Oct. 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. Dickinson, "On the Morbid Effects of Alcohol as shown in persons who trade in Liquor."

Wednesday, Oct. 23.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2 P.M.
CANCER HOSPITAL.—Operations, 3 P.M.

Thursday, Oct. 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 3 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 3 P.M.
HUNTERIAN SOCIETY.—8 P.M. Open Meeting.

Friday, Oct. 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Dr. Anstie, "On a Case of Syphilitic Paralysis, with rapid Atrophy and Repair of Muscle." — Mr. Cooper Forster, "On a Case of Cystitis treated with Injection of Opium into the Bladder."—And other papers.

Saturday, Oct. 26.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

PATENT WASHABLE PAPERHANGINGS.

WE have received from *Messrs. Wilkinson and Son*, of Old Bond-street, some specimens of patent washable paperhangings, which may be cleansed, when soiled, by washing, and which have the advantage of becoming as hard as stone when hung on room-walls. Medically these papers are of interest, inasmuch as they are said not to absorb the contagion of infectious disorders, so that a sick-room may be thoroughly cleansed by the simple application of soap and water, without the necessity for stripping the paper off the walls. If this simple plan is really efficacious, the invention will be a real domestic boon.

THE communication of *Mr. W. J. Marsh* (Shrewsbury) is acknowledged with thanks. We should be glad to have our correspondent's scheme in detail, if he will kindly make it as concise as practicable.

Anti-Chloroform.—We are not aware of any surgeon who makes it an invariable practice to adopt the form of operation alluded to by our correspondent.

DOES SMALL-POX AFFECT THE CHILD IN UTERO?

To the Editor of THE LANCET.

SIR,—I can most positively answer the above question in the affirmative, having delivered a woman of a child covered with small-pox pustules, the mother being in a like condition. On the other hand, I have several times seen children in after years suffering from small-pox, notwithstanding that I had attended their mothers with the same complaint when the children were in utero.

Yours truly,
Harston, Cambridge, October, 1872. H. ERNEST TRENTRAIL, L.R.C.P.

HEROISM IN HUMBLE LIFE.

GOOD nursing is the indispensable ally of successful medical treatment. And none are more ready to admit the truth of this proposition than medical practitioners, as none know better than they how much their skill requires to be supplemented by the assiduous and thoughtful ministrations of the sick attendant in order to bring about a happy issue in any case of serious illness. Indeed, the undue favour with which the expectant plan of treatment is nowadays regarded is probably owing in great measure to its having been credited with the good results which have followed a juster recognition of the value of nursing, and the zealous efforts that have been made to render it more complete. We are glad, in this connexion, to give additional publicity to a fine act of self-devotion by a nurse in the Alexandra Orphanage, Hornsey-rise, which obtains fitting and honourable mention in the Report of that institution for 1871. A paragraph in the Report expresses the pleasure with which the Committee record "the faithful services of the nurses, one of whom volunteered to be shut up with an infant suffering from small-pox, in one of the yet unoccupied cottages, so that infection might not spread among the inmates." Verbal approval of this noble act was accompanied, as was most, with a more substantial acknowledgment in the shape of the gift of a silver watch and guard and a book, which were presented to Esther Leach by a member of the Committee on the occasion of her leaving the Orphanage.

A First-year's Man.—Such a book may be purchased at Renshaw's, Strand.

AN ENLARGED HEART.

To the Editor of THE LANCET.

SIR,—The following case may be of sufficient interest to the profession to warrant its publication.

F. S——, a stout, healthy-looking labourer, was admitted into the Liverpool Workhouse Hospital a short time ago, suffering from constipation and abdominal pains. He confessed to have led a very "hard" life, and to have been drinking heavily for some weeks previous to his admission. There were no symptoms of thoracic disease, in consequence of which no examination of that region was made. Under aperients, mild food, and poultices to the abdomen, he was rapidly recovering until near midnight of the fifth day of his stay in the hospital, when he was suddenly attacked with extreme dyspnœa and symptoms of profound collapse. Stimulants were freely exhibited; but he sank in the course of a few hours.

On examining the abdomen, there was evidence of slight inflammatory action in different parts of the intestinal canal, sufficient to account for the abdominal symptoms. The liver was enlarged and fatty, and the kidneys seemed healthy. On opening the chest, we were at once attracted by the enormous size of the heart. The pericardium was healthy, and contained a little serum. Both ventricles were enlarged by about one-half; the right auriculo-ventricular opening admitted three fingers with ease; the left auriculo-ventricular opening would scarcely admit three fingers. The tricuspid valve was enlarged, but healthy. The mitral was thickened; its edges nodulated; its size small, compared with its opening. The wall of the right ventricle was about two lines thick; that of the left about eight lines, in some places one or two lines more; whilst that of the septum was about an inch. The weight of the heart, after being washed and freed from all its appendages, was *twenty-four ounces*. This was after it had been kept three days in dilute glycerine. The lungs were perfectly healthy.

I am Sir, yours truly,
WM. ALEXANDER, M.D., House-Surgeon.
Workhouse, Brownlow-hill, Liverpool, Oct., 1872.

THE ADULTERATION ACT.

DR. MUTER has been appointed analyst for the parish of Lambeth. The Bolton magistrates have fined a grocer 2*s.* 6*d.* and costs for selling coffee adulterated with chicory, also another 2*s.* 6*d.* for selling a highly coloured and rancid butter which contained 20 per cent. of water and 7·6 per cent. of salt; they also fined a milkseller 10*s.* and costs for selling a pint of milk which contained 20 per cent. of water and only 2 per cent. of cream. The fines were small in consequence of these being the first prosecutions under the Act. The Liverpool Health Committee have decided to recommend the appointment of Dr. James Campbell Brown as public analyst for the borough, at a salary of £200 per annum.

Z. is referred to the tables published by the Registrar-General, the chapters on the Causes of Disease in Watson's Practice of Physic, and the introductory chapters of Guy's Physician's Vade-Mecum.

A Daughter of the Sufferer should apply to a Hospital for Incurables.

THE EXHIBITION OF ETHER AS AN ANÆSTHETIC.

To the Editor of THE LANCET.

SIR,—Dr. Vivian Poore, in his "Clinical Remarks on Chloroform and its Administration," published in your last number, states that Mr. Liston was the first person in this country to exhibit ether previous to an operation.

I beg to state that I have a prior claim to Mr. Liston in this matter, as I exhibited ether on the 19th December, 1846, to a patient in the Dumfries and Galloway Royal Infirmary. My much esteemed and lamented friend, the late Sir J. Y. Simpson, having investigated the facts, with the statement I have made, was so satisfied with the authenticity of it that he not only in his lectures to the students attending his class, but also in his lecture on Anæsthetics delivered before the Royal College of Surgeons in March, 1868, stated the priority of my claim to Mr. Liston.

I may add that I received my information relative to the anæsthetic properties of ether from the late Dr. Fraser, surgeon of the *Cunard* steamer, which brought the important news from New York, and I operated as I have said within forty-eight hours of the discovery having been brought to this country.

Your obedient servant,
WM. SCOTT, M.D.,
Surgeon to the Dumfries and Galloway Royal Infirmary.
Dumfries, October 15th, 1872.

SANITARY EDUCATION.

DR. P. W. HEADLAND, Honorary Associate of the Order of St. John in England, has lately proposed a scheme in connexion with the philanthropic work of the Order which strikes us as a very good one. It is that the Order shall undertake in some sort the education of the people in sanitary science by the wholesale issue, at a cheap rate, of a series of pamphlets on subjects connected with health. The sanitary question, by universal consent, is the next for legislation; but legislation cannot do everything. The beginning and end of sanitary reform is, after all, in the household, and the poor require to be instructed how to do that for themselves which no rulers can do for them. As Dr. Headland well remarks, an inspector can do nothing outside a closed door; but within that door the father of a family may admit the light and air, neutralise effluvia, abolish contagion, trap the drains, arrange for the proper feeding and proper clothing of his children. The plan sketched by Dr. Headland embraces the publication of Tracts for the People on the fundamental conditions of health—on such subjects as Air, Water, Food, Exercise, Light, Heat, and Cold; to be supplemented by others by scientific men on subsidiary subjects, such as the Choice of a Dwelling, Marriage and Economy, Nursing, Contagion, and so on.

Mr. Wm. Pilkington had better summon the disturbers of his peace. Publicity would probably act as a corrective.

THE REGISTER OF HEALTH.

To the Editor of THE LANCET.

SIR,—Will you allow me to make an explanation in reference to your notice of this subject in your last number?

I have always been convinced that no good result can be expected but by the most simple arrangement, and therefore with the object of *avoiding* the burden which M. Fonssagrives laid upon materfamilias in the register he asks, and which could not be carried out, I have restricted the information to *a concise entry by the medical attendant*; and although such would be more perfect if commenced from birth, the register I propose (not being intended to collect tabular or statistical information) is designed for use on any occasion to supply a means of communication between medical men with a view to consecutive treatment.

The careful physician makes short notes of each case which presents itself for the first time, and refers to them in subsequent consultations; but such record is of service only to himself. Should not an entry of the diagnosis be in the patient's custody, as is the prescription; for since the keeping of cases in private practice is impossible, he would be able to produce his own case readily. This bears on the question of consultations, where a patient sent from a distance requires a letter from his attendant, and a reply from the physician. This is a serious tax on time, and could be often avoided in the register I advocate. I have had occasion for its use during the last few days in the case of a boy, suffering from epilepsy, sent to Guy's Hospital for treatment, and in that of a patient sent home from a London hospital, incurable, where I have asked an entry from the physician who attended her, and am about to employ it for cases leaving the neighbourhood. To carry out the idea, it is only necessary that every medical attendant should, when he deems it requisite, require a form to be furnished by the patient, in which to make an entry. In public institutions there could be no difficulty, and no case would leave without a record in his possession.

I venture to think that any plan, however partial, that will contribute to greater exactness in medical practice is desirable; the question as to the suitability of the form I must leave to those who will have an opportunity of inspecting and testing it. Yours truly,

Lewisham-hill, Oct. 14th, 1872. FREDERICK H. SMITH, M.D.

M.D.'s question had been mislaid, and we must apologise for delay. Compound fracture of the humerus is not specified in Article 177, prescribing the remuneration of medical officers; in other words, it is not distinguished from simple fracture, for which the fee is only £1. This would be very inadequate remuneration for a compound fracture, and the guardians have the power, under Article 181, of making such extra allowance as they may think fit and the Commissioners may approve. The last edition of Tanner's Index was published in 1866.

THE CURABILITY OF CANCER.

WE must decline inserting any communication of the kind forwarded to us by a correspondent.

A Constant Reader must have perused our columns to very little effect not to have noticed that it is our custom to decline recommending any physician or surgeon by name, or furnishing his address.

ADMINISTRATION OF CHLOROFORM TO CHILDREN DURING SLEEP.

To the Editor of THE LANCET.

SIR,—I notice an inquiry in your columns from a correspondent respecting the administration of chloroform during sleep. In reply, allow me to state that I have on several occasions given chloroform to children when they were in bed asleep. So soon as anæsthetised, they have been lifted on to a table or couch, the operation performed, and the little patients returned to bed. A good deal of fright and trouble is thus spared them, and operations for squint, obstructed lachrymal ducts, for cataract, and other surgical procedures are very well done in this way. I may mention that I have lately been using ether, after the manner of Dr. Joy Jeffries, rather extensively, and find it quite as effectual as chloroform, and apparently much safer.—Your obedient servant,

CHARLES BELL TAYLOR, M.D.,

October, 1872. Surgeon, Nottingham and Midland Eye Infirmary.

A CORRESPONDENT of the *Indian Statesman*, who has suffered severely from sea-sickness in various voyages, states that he now obviates it by lying on his back until his "system had become accustomed to the rolling and pitching motion."

Mr. Wm. Richardson's communication arrived too late for insertion in our present number.

A STRANGE ANSWER.

AMONG the "Notes, Queries, and Replies" of a medical contemporary, we have been struck by an answer in which a correspondent is informed that he "cannot do better than consult Mr. Hancock, President of the Royal College of Surgeons. He resides in Harley-street, London." The querist cannot, from the very nature of the details given, be a member of the medical profession; and the reply seems, at first sight, to be a departure from the sound rule generally observed by medical journals, of declining to recommend any particular consultant. We hope, and we are sure Mr. Hancock will join with us in hoping, that in this case it may admit of some other explanation.

FEEDING BY THE NOSE.

To the Editor of THE LANCET.

SIR,—I dare say most of your readers will be surprised to hear that in this our boasted nineteenth century the following, or something like it, is still the process of feeding commonly adopted in the case of those who object to take food in the ordinary way. The proceedings commence with a struggle, during which much violence is displayed and bloodshed produced by the operator, and which results eventually in the complete exhaustion of the patient. This favourable opportunity is seized for screwing a perforated gag between the clenched teeth of the unfortunate victim. The operator, not to speak of him too harshly, now produces an engine or a weapon, it matters not which, so that it be unmerciful, dangerous, and, above all, lethal. He further rudely thrusts the weapon down the throat of the aforesaid victim, probably tearing the mucous membrane to shreds, and piercing the aorta. He finally consummates the outrage by brutally pumping what he terms nourishment through the weapon, it may be into the stomach, but more likely into the bronchial tubes of the sufferer, who is by this time, as may be supposed, either past the necessity or the possibility of any repetition of the operation.

The above somewhat sensational description is not culled, as one might think, from any of the works of Mr. Charles Reade, but is contained nearly *verbatim* in papers recently published by Dr. Anderson Moxey, the few and slight alterations, or rather additions, I have ventured to make being only for the purpose of rendering the narrative more compact and consecutive.

But, seriously speaking, what does Dr. Moxey expect to gain by the exaggerated language and false logic with which he attacks the stomach-pump and the persons who persist with "simple madness" in the obsolete use of it? The immediate occasion of the outburst seems to have been the case of suicide by starvation of a criminal recently reported, which to me seems to bear scarcely at all upon the point at issue. The violent shaking of the head which it seems caused the injuries, would have altogether prevented feeding by the nose, and if by controlling the head nasal feeding had been rendered possible, there is no reason for doubting that feeding by the pump would have been equally easy, and that the injuries would not have occurred. In fact, all that the case as reported can be made to prove is, not the danger of feeding by the pump, but simply the necessity of having the patient thoroughly controlled before attempting the operation, which necessity equally applies not only to all methods of feeding, but to every operation of any kind undertaken against the will of the patient. It is absurd to speak of violence and bloodshed as generally connected with the use of the pump; for the force used in opening the mouth, and the bleeding from the gums, which rarely occurs if a proper instrument be used, are neither of them great in degree, or worthy of the startling appellations Dr. Moxey gives them.

The graver accidents which have at times resulted in the use of the œsophagus tube are of rare occurrence—not more frequent, I opine, than similar accidents which every now and then occur in the course of other operations. Nor do they give cause for a wholesale condemnation of a valuable means of treatment. Dr. Moxey's alternative plan of passing a No. 13 catheter in place of an œsophagus tube seems to combine most of the objections to the stomach-pump, with others special and peculiar to itself, the chief of which, perhaps, is that, owing to the smallness of the channel, the operation must necessarily be much prolonged, to the discomfort of both patient and operator; and secondly, the increased probability of entering the larynx.

The various plans of feeding which have been recommended from time to time are discussed by Dr. Blandford in his work on Insanity, and he records his decided preference for the method by stomach-pump over that of Dr. Moxey and all others. For myself, in cases of strenuous and persistent refusal of food, I have always made use of the stomach-pump in the ordinary way, except that I do not employ the perforated gag. Of such cases I have had not a few, and am happy to say that I have never met with any serious accident, or beheld scenes of horror such as Dr. Moxey describes.

I am, Sir, yours, &c.,

J. CUNNINGHAM RUSSEL, M.D. Edin.

County Asylum, Lancaster, Oct. 9th, 1872.

To the Editor of THE LANCET.

SIR,—After the able treatment of the above subject in the treatise by Dr. Moxey, I am almost afraid you may deem the following remarks presumptuous; but as they are intended more as suggestions than by way of assertion, you may probably deem them worthy of notice in your valued journal.

It would appear that the injection through the nose of fluid containing salt, pepper, or other irritants, as also certain inflammatory fluids—to wit, brandy or wine, &c., would be attended, if persisted in, with some degree almost of inflammation or chronic disturbance of the mucous membrane, with attendant thickening. It occurred to me that the whole of the above symptoms might be guarded against by simply passing a flexible india-rubber tube through the nose as far as the posterior nares, and attaching to the other end the wedgewood funnel, or, perhaps better still, a syringe from time to time charged with the fluid nutriment. It would almost appear to be less likely to be ejected by the patient if the current be rapid and somewhat forcible than otherwise. It might also be added that the flexible tube, if allowed to project a little beyond the nose, would, in the event of a sudden movement, in an unguarded moment, of the patient, prevent any injury that otherwise might arise from the funnel.

I remain, Sir, your obedient servant,

EDWD. J. ADAMS, M.R.C.S.,

Medical Officer and Vaccinator, St. Matthew's Infirmary,

October, 1872. Bethnal Green.

BEST COPY AVAILABL

DRAINAGE OF MIDDLESEX HOSPITAL.

IT would appear, from some statements in Dr. Whitmore's last Monthly Report on the Health of Marylebone, that the drainage works which have been recently carried out at Middlesex Hospital were not undertaken one whit too soon. The old drains were in a most defective and unsatisfactory condition. Under the floor of the scullery and kitchen were old brick drains, containing when opened a deposit of nine inches of sewage matter. Two large cesspools were discovered, one under the kitchen, the other under the crockery store, both filled to a depth of three feet with sewage matter. The removal of these cesspools appears to have been carried out very thoroughly, and everywhere glazed stoneware pipes have been laid in place of the brick drains, so that the authorities and inmates of the hospital may rest secure in the knowledge that everything has now been done to make the sanitary arrangements of the building what they ought to be.

A Beginner will find that most elementary books on Chemistry will afford the information he requires.

UNUSUAL SYMPTOMS FOLLOWING THE EXHIBITION OF ENEMATA.

To the Editor of THE LANCET.

SIR,—As enemata are generally considered such very safe remedies, I think it as well to record a case in which on two occasions their use has been followed by alarming symptoms.

A patient, suffering from melancholia, with the delusion that all but his head is dead, had confirmed constipation and some vomiting. No signs of abdominal disease can be discovered. My senior officer, Dr. W. R. Williams, ordered the exhibition of an enema of soap-and-water, and requested me to superintend its use. It was given, and caused a free action of the bowels within a quarter of an hour. A few minutes later I was called to see him, as the attendants thought him dying. I found him collapsed, and all but pulseless. Repeated doses of brandy and friction brought him round. For some weeks he improved in general health, and the sickness subsided. Constipation having again lasted for a week, I gave him carefully another injection, and kept him lying down, except for two spaces of a minute each, when he passed the injection, and secondly a copious solid stool. When laid down again, he collapsed in a most alarming way, and I feared whether brandy would have pulled him through. This will cause me to be more anxious than I have been when I order injections. There is no history to lead us to suspect old abdominal mischief of any kind. We consider this case worth reporting from its rarity.

I am, Sir, yours truly,
GEO. H. SAVAGE,
October, 1872. Assistant-Physician to Bethlehem Royal Hospital.

Ignoramus.—Such a question, like most other questions in medical ethics, cannot be answered absolutely. A medical man should be extremely reluctant to undertake the medical attendance of patients to whom he has been introduced as the *locum tenens* of another medical man. But special circumstances might occur in which it would not be wrong to do so. In the circumstances specified by our correspondent, supposing the conduct of the practitioner who acted as *locum tenens* to have been perfectly honourable, and that of the patient not capricious or unreasonable, we do not see that he would be justified in refusing to attend the case.

A. T.—If the invention be adapted to public buildings, our correspondent might apply to the War Office for permission to bring it before the Army Sanitary Commission.

CHLORAL HYDRATE AND IODIDE OF POTASSIUM.

To the Editor of THE LANCET.

SIR,—Having read in your journal of the 21st ult. that one dose of a mixture containing forty grains each of chloral hydrate and iodide of potassium produced severe iodism, and in several other cases iodism in a less degree, also that the relief afforded in painful affections was very marked, on the 23rd and two following days I placed twenty patients under a course of treatment by the combined drugs—from forty to sixty grains each in an eight-ounce mixture, one ounce three times a day. In not a single instance did iodism result, nor was the relief to pain other than might have been expected from the unaided iodide. Most of the patients treated were suffering from syphilitic rheumatism and eruptions, their ages varying from twenty to thirty years. The mixture was taken for eighteen days consecutively.

I am, Sir, yours, &c.,
October, 1872. ASSISTANT-SURGEON.

A Sanitary Inquirer will find that the opinion we expressed is in accordance with that put forward by the most trustworthy and experienced medical officers. Dr. Muir, for example, says that the kind of barrack that is wanted for the greater part of the plains, save Lower Bengal, is an inexpensive building of sun-dried bricks, with a sun-proof roof, and provided with the other necessary conditions of space, reasonable segregation, and efficient drainage. Such structures, he urges, in the event of any locality becoming frequently unhealthy, could be thrown down and erected elsewhere, the materials being used the second time.

Microscopist.—The illuminator hand microscope is the invention of Prof. Guy, F.R.S. We cannot speak of its merits from any knowledge of our own. It is supplied in three forms by the manufacturer, Mr. James How, Foster-lane, London.

FLOATING BATHS ON THE THAMES.

AT the next Court of the Common Council the following motion will be considered:—

"That it is highly desirable that this Corporation should construct and maintain for the use of the citizens floating baths upon the Thames as soon as the main drainage of the metropolis is effected, and that it be referred to a Committee to inquire into the cost of construction, and the probable annual outlay for the maintenance, if any, and to report generally thereon to this Court."

TOBACCO.

THE taste for tobacco when once acquired is a very strong one. There is no deprivation which prisoners and others accustomed to its use feel so much as the loss of their pipe. The first thing for which the German soldiers sought on capturing a place was tobacco, and an issue of cigars became a recognised custom. Our own soldiers are commonly, though not by any means universally, "smokers"; and lunatic soldiers may often be tempted to undertake useful work by the bribe of an allowance of tobacco. It is seldom also that people are too poor to provide themselves occasionally with tobacco. As an instance in point, the *Pall Mall Gazette* tells us that the managers of the Central Sick Asylum Infirmary at Highgate lately issued orders for the discontinuance of smoking by the patients in either the infirmary or grounds. On inquiry being made, it was found that twenty-three of the patients, although paupers, had pipes and tobacco in their possession.

W. E. A. is thanked for his communication; but we do not think that its publication would add much to our information regarding the use of the drug.

"THE BEGINNINGS OF LIFE."

To the Editor of THE LANCET.

SIR,—The reviewer of Dr. Bastian's work on "The Beginnings of Life" did not mention in the published report which appeared in your columns in last week's number of THE LANCET whether Dr. Bastian had submitted his organic infusions to *intense cold* as well as *intense heat*.

If Dr. Bastian has tried the effect of *intense cold* on organic infusions, it would be interesting to know the result.

I am, Sir, yours obediently,
October 14th, 1872. J. CASTWRIGHT REED, M.D.

N.B.—A friend suggested that it would be well to submit the same fluid to repeated effects of intense heat or cold, and again resubmitted to sunlight.

*** Dr. Bastian does not appear to have submitted his solution to the action of intense cold. Cold would be much less certain to destroy the capacity of germinating in spores than heat.—ED. L.

A. B.—The examination must not be understood in the restricted sense referred to by our correspondent, though, doubtless, it refers chiefly to diseases of parturition and of the uterus. It would be well to become acquainted with the writings of the examiners respectively, Dr. Arthur Farre, Dr. Barnes, and Dr. Priestley. Churchill's Midwifery is a good text-book. The publishers of Dr. Barnes's work on Obstetric Operations are Messrs. Churchill.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. C. Black; Dr. E. Goddard; Dr. J. C. Reed; Mr. Raven; Dr. F. de Havilland Hall; Mrs. Abercrombie; Dr. Anderson, Edinburgh; Surgeon-Major De Renzy; Dr. Smith, Lewisham; Dr. Savage; Mr. Chatton, Leeds; Mr. J. Howdon, Swindon; Dr. Blower, Bedford; Mr. Murray; Mr. Adams, Bethnal Green; Mr. Willis; Dr. Richardson, Stockwell; Dr. Rhind, Pretoria, South Africa; Mr. Clare, Falmouth; Mr. Luking; Mr. J. Beamish, Bath; Mr. P. Gilson, Higham Ferrers; Mr. Eade, Lichfield; Mr. Phillips, Horbury; Mr. Cracc, Spalding; Dr. Williams; Mr. Everrett, Cirencester; Mr. B. Hammerton; Mr. Holford; Dr. Alexander, Liverpool; Mr. West, Bicester; Mr. Hewling, Bury; Mr. H. Hemming, Southampton; Mr. Walkey; Mr. Davey, Leyton; Dr. Lawton; Dr. Moore, Coventry; Dr. Morris, Spalding; Dr. Dougall; Mr. J. Williams; Mr. Keymer; Mr. J. Marsh, Shrewsbury; Mr. Farrow; Dr. Steele, Liverpool; Mr. Carr, Glasgow; Mr. Whiteley; Mr. Maddick; Mr. Poore; Mr. E. Parkiss, Stroud; Mr. Davis; Mr. Tanner, Painswick; Dr. Macrae, Portsmouth; Dr. Scott, Dumfries; Dr. Kibbler; Mr. James, Cork; Mr. G. Smith; Mr. Rennison, York; Mr. Kinsoul; Mr. Searson; Mr. E. Williams, Carnarvon; Dr. Bloomenthal, Berlin; Mr. Boyd, Wakefield; Dr. Davy, Dublin; Mr. Armstrong, Newcastle-on-Tyne; Dr. Hooper; Mr. Lawford; Mr. Moore, Hereford; Dr. Gilruth, Edinburgh; Mr. Cater; Dr. Crisp; Mr. Rainton, Ruabon; Mr. Fawcett; Mr. Kenyon; Dr. Ringer; Dr. Gramshaw; Dr. Cowen, Upper Holloway; Mr. Bradley, Manchester; Mr. S. A. Willis, Sheerness; Mr. M'Clellan; Mr. Dickinson; Mr. Atkins; Dr. Trestrail, Harston; Dr. Jones, Towyn; Dr. Powton, East Grinstead; Mr. Hardy; Dr. Riddell, Buxton; Dr. Pilkington, Chorley; Dr. Fawley, Tralee; Mr. Brooke; Mr. Burton; Dr. Larkin, Bilston; Mr. Hitchcock; Dr. Drury, Harlestone; Mr. Peck; Dr. Hane, Edinburgh; Mr. Handford, Derby; Mr. Harrison, Kilham; Mr. Wallis; Mr. M'Donnell, Belfast; Mr. Forman; Mr. Hicks; Dr. Russel, Lancaster; Dr. Taylor, Nottingham; Mr. Joynson; Mr. Preston; Dr. W. J. Smith; Mr. Phillip; Mr. Sidney; A M.D. of Giessen; The Editor of the *Sunday School Teacher*; Ignoramus; Modern Progress; A Beginner; A. B.; Fusbos; Anti-Chloroform; L.M.; A First-year's Man; B. C. R.; A. Z.; Viator; &c. &c.

Liverpool Daily Courier, Canada Lancet, Local Government Chronicle, Pembrokeshire Advertiser, Manchester Evening News, Lady's Own Paper, Anti-Game Law Circular, Keene's Bath Journal, Huddersfield Chronicle, Bulletin de Statistique Municipale (Paris), *Telegraphic News, Glasgow Weekly Mail, Jamaica Church Chronicle*, and *Orkney Herald* have been received.

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29, 30, and 31, LONG ACRE.

THE great success that has attended the introduction by Mr. STRONG of these elegant and useful little Carriages has induced some Coach Builders to copy the style of Carriage, without taking the necessary precaution of using only the best materials, which is of the first importance in the manufacture of light Carriages. He has built these Carriages uninterruptedly for twenty-five years, and in order that their quality may be tested,

R. STRONG has adopted the mode of LETTING them for THREE YEARS, after which, WITHOUT FURTHER PAYMENT, the CARRIAGE BECOMES the PROPERTY of the HIRER.

[Extract from the MORNING POST of February 2nd, 1871.]

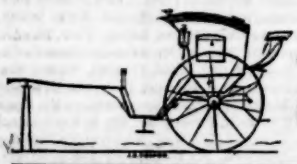
"AN IMPORTANT IMPROVEMENT IN CARRIAGE CONSTRUCTION.—Numerous accidents of a most deplorable and alarming character have proved beyond a doubt that the use of hickory wood and steel tyres in carriage building is an extremely dangerous practice, and one which, in the interest of public safety, ought to be discarded. It is useful, therefore, to know that Carriages of every description, and Miniature Broughams in particular, of elegant design and first-class workmanship, are now made by Mr. Strong, the well-known Carriage Builder, of Long-acre, of well-seasoned English woods, and that many very severe experiments have fully confirmed the superiority of these home materials. Mr. Strong has evidently endeavoured to lead the van of progress in the art of carriage manufacture, and by a happy combination of art and science in his work has certainly succeeded in producing some of the most graceful, durable, and comfortable Broughams and Landaus ever seen. The attainment of extraordinary lightness with great strength, of luxurious ease with remarkable beauty, and, above all, of considerable economy in cost, are matters very interesting to those who watch our national progress in this branch of trade. Few persons who find a really good carriage indispensable can fail to appreciate the attractive improvements mentioned. Mr. Strong offers every facility for the public to avail themselves of these improvements by the three-years purchase system."

STRONG'S CARRIAGE MANUFACTORY, 29 to 31, LONG ACRE.

BROCKELBANK'S CARRIAGE & HARNESS MANUFACTORY,

7 & 10, ISLINGTON GREEN, LONDON, N.

CARRIAGES of all kinds, in STOCK and BUILT to ORDER, with Homogeneous Iron Carriages, of the *lightest and most approved construction*. To Let on Job, with or without option of purchase. Also Let on the Three-years' System. After the third payment the Carriage becomes the property of the hirer. Hickory Wheels if required.



FORDER & CO.,

CARRIAGE WORKS, WOLVERHAMPTON.

Medical Gentlemen using two-wheel Carriages will find their Horses can do double the work by the use of their light Carriage. Send for Price List.

Medical Cab to be seen at Crystal Palace, Sydenham. Cab only 6 cwt.; Gig only 3 cwt.

STANDFIELD & CROSSE, Carriage, Saddle, and Harness Makers, Exeter,

beg to call attention to their

PATENT "ISCA" CARRIAGE,

Patented in England, France, and Belgium. — THE GOLD MEDAL was awarded to this novel invention at the International Exhibition, 1870.

The "Isca," which is a perfect open or close carriage, has so many desirable advantages over every carriage of its class yet introduced, that it has already become a general favourite, and should be seen by all intending purchasers of carriages.

Drawings, Opinions of the Press, and any information may be obtained of the Inventors and Patentees, or at the Carriage Department, Crystal Palace, where specimens of the "Isca" can be seen.

The following Coachmakers are appointed Agents for the sale of the "Isca":—

J. Robertson, Glasgow.	Forder & Co., Wolverhampton.	Fuller & Simpson, Leamington.
Maule & Sons, Berwick and Alnwick.	T. J. & J. F. Perry, Bristol.	Doxsey, Cheltenham.
Angus & Co., Newcastle-on-Tyne.	Wilson & Son, Sheffield.	Bradley, Leeds.
Mann & Co., Scarborough.	Starey, Nottingham.	Rock & Son, Hastings.
	Kinder, Leicester.	Bulley & Co., Plymouth.

To any of whom application is respectfully invited.

Messrs. STANDFIELD & CROSSE. Chertsey, Surrey.

DEAR SIRS,—I have delayed answering your letter requesting of me a Testimonial in favour of your Patent "Isca" Carriage till I had given it a thorough trial. After several months' use I can now unhesitatingly state that it is in every respect a great success. It bears the hard work I give it very well indeed; and though I have opened and shut it a good deal, it has remained perfectly watertight throughout the excessively wet spring we have had. I consider it far lighter than the lightest of Miniature Broughams. One horse takes me my very long rounds with perfect ease. For a Medical Practitioner I consider it the perfection of carriage; and from the speed and ease with which it can be closed I consider it specially adapted for persons who only keep one carriage.—I am, Gentlemen, yours obediently,

T. A. CHALDECOTT, M.D.

WINDOVER'S

LIGHT AND DURABLE CARRIAGES.

Medical Gentlemen, and others, who are in search of light and durable Carriages, are solicited to inspect the Stock of C. S. WINDOVER, who now has a variety of his celebrated Carriages for Sale, which have been awarded Prize Medals at all the Exhibitions for good workmanship, light construction, and excellent finish. Several second-hand light single- and double-seated Broughams for Sale at WINDOVER'S CARRIAGE WORKS, LONG-ACRE.

N.B.—References and Testimonials forwarded on application.

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CARRIAGES OF ALL KINDS BUILT FOR PROFESSIONAL GENTLEMEN, with a due regard to the minimum of weight with the maximum of strength, by the adoption of all materials of the very best of their kind. B. J. B. will give a written guarantee with all Carriages supplied by him. Awarded a Silver Medal at the Horse Show, Islington, for a Mail Phaeton under 4 cwt. Jurors' report:—"For good workmanship, light construction, and excellent finish."